

ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
OF THE
PROVINCE OF ALBERTA
FOR THE YEAR
1933

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DEPARTMENT OF AGRICULTURE, EDMONTON.

To His Honour,

WILLIAM LEGH WALSH,

Lieutenant Governor of the Province of Alberta.

SIR,—

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1933.

I have the honour to be, Sir,

Your obedient servant,

GEORGE HOADLEY,

Minister of Agriculture.

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DEPARTMENT OF AGRICULTURE

1933

Hon. George Hoadley, Minister of Agriculture

Heads of Branches

- H. A. Craig, Deputy Minister and Superintendent of Schools of Agriculture.
- J. F. Andrew, Assistant Deputy Minister of Agriculture and Director of Demonstration Farms.
- P. W. Johnson, Secretary to the Department.
- C. P. Marker, Dairy Commissioner.
- S. G. Carlyle, Live Stock Commissioner, Brand Recorder and Superintendent of Fairs and Institutes.
- P. R. Talbot, V.S., Provincial Veterinarian.
- E. L. Gray, Field Crops Commissioner.
- G. M. Cormie, Poultry Commissioner.
- S. H. Clark, Game and Fire Commissioner.
- G. S. Black, Supervisor of School Fairs and Junior Farm Club Work.

Report of the Deputy Minister

HONOURABLE GEORGE HOADLEY,
Minister of Agriculture.

SIR,—

I have the honour to submit herewith the report of the Department of Agriculture.

The production of field crops in Alberta in 1933 fell considerably below that of 1932 or of any recent year. Seeding commenced under very favourable circumstances, with an ample supply of moisture and an adequate supply of good seed. As the season advanced, drought, grasshoppers and frost combined to cause serious damage to crops, so that the total yield of wheat was 94,500,00 bushels as compared with 170,500,000 in 1932. The severe drought of midsummer resulted in crop failure over a large area in the southern part of the Province, and created an acute feed shortage. Frost occurred at many points, particularly in northern Alberta, lowering grades and in some districts causing much of the crop to be unfit for seed. Interest in pasture and forage crops continues to increase as their importance in the rotation is more fully realized. The sugar beet crop, while fairly satisfactory, was considerably below that of the previous year. Fortunately there has been a general, though slight improvement in market conditions in comparison with those prevailing in the previous year.

The live stock industry has suffered severely, due to feed shortage over a large area of southern Alberta including a considerable portion of the range area. It has been necessary for stockmen to purchase feed in large quantities or to ship their live stock to other localities for winter feeding. These conditions, during a period of low prices, have had an adverse effect, particularly on the beef cattle industry. In those parts of the Province where feed is plentiful, there is an increased interest in the finishing of beef cattle and lambs. During the year 11,618 cattle were exported as compared with 4,225 in 1932 and 9,373 in 1931. The high quality of these animals made it possible to export them in large numbers, and there is no doubt that this had a very beneficial reaction upon local markets. The substantial increase in hog prices, due to an improved export market, has created a keen demand for breeding stock in those areas where feed supplies are plentiful. A strenuous effort is being made to improve the quality of hogs marketed so that full advantage may be taken of the opportunity offered in the British market due to the export quota for Canadian bacon. Wool prices have almost trebled during the year, and the demand for rams at the larger sheep sales indicates a revival of interest. The tendency which has been in effect during recent years to depend upon the horse as a source of farm power continues to increase, with the result that there is a keen demand for good work horses. Stallions are also keenly sought after.

A report of the dairy industry indicates that it is in a much more favourable position than it was a year ago. At no period did prices decline to the disastrously low level experienced in 1932. The total output of dairy products is valued at \$12,725,000, an increase of 7% over the previous year. Butter production reached the record total of 36,000,000 pounds. Creamery production showed an increase of 13% in volume and a 5% increase in selling price. There was a slight decline in cheese production, and in view of the fact that one-half of the cheese consumed in Alberta is exported, there would appear to be opportunity for expansion in this branch of the industry. The quality of products delivered to creameries shows steady improvement as illustrated by the fact that in 1933, 66.8% of all cream graded special as compared with 59.7% in this grade in 1932.

While poultry prices are still low, there was a distinct improvement in this regard toward the end of 1933. This was particularly true of prices paid for turkeys and market poultry, which advanced from 15% to 20% over those of the previous year. It is interesting to note that an increased quantity of eggs, live and dressed poultry is finding a market in the neighbouring province of British Columbia. Climatic conditions in Alberta seem to be ideal for poultry, and abundant supplies of cheap grain ensures a low production cost. The various poultry improvement policies of this Department are producing very satisfactory results, and the campaign to eradicate Bacillary White Diarrhoea from flocks under Government supervision is very successful. The poultry industry is in an excellent position to take advantage of any improvements which may occur in economic conditions.

The honey crop of 1933 was almost twice as great as that of 1932, and was readily marketed at increased prices. As a result, owners of commercial apiaries in the southern part of the Province report a fairly satisfactory year. Measures taken for the purpose of eradicating disease have been very effective, and the industry is developing along sound lines. The number of small apiaries continues to increase and is an indication of the widespread effort to make the farm a self-sustaining unit.

Throughout the year there has been a very keen interest evident in all educational and promotion work. Short courses were well attended and junior activities increased considerably. Two thousand eight hundred and forty-three farm young people are now members of junior clubs and engaging in educational programmes embracing many branches of agriculture. Although school fairs did not receive the assistance given in former years, ninety-two associations held successful fairs. The value of the services rendered to farmers by the District Agriculturists has again been demonstrated, and their assistance in solving individual problems and in organization work has been much in demand. The School of Agriculture at Olds continues in operation with an attendance of 156 students which, in view of economic conditions, may be regarded as satisfactory. The School of Agriculture at Vermilion was closed at the conclusion of the 1932-33 term.

It is gratifying to report that there has been a general upward tendency in the price of farm commodities, and it is hoped that this may continue until a return has been made to normal price levels. Unfortunately the conditions existing as a result of crop failure over a large area tend to offset the improvement which might otherwise have occurred. In spite of the unsatisfactory financial returns it is encouraging to know that our agricultural products excel when brought into competition with those of other provinces and countries. This has again been demonstrated by the outstanding success achieved at the World's Grain Show and Conference, Regina, in August last, and at the International Grain and Hay Show and the Royal Winter Fair. Under the present competitive conditions in export markets the assurance of ability to produce high quality products creates confidence that the farmers of this Province will be able to compete successfully in world markets.

The reports of the various branches are attached herewith, and give a résumé of the work carried on by each.

H. A. CRAIG,
Deputy Minister.

Report of the Dairy Commissioner

(C. P. MARKER)

GENERAL.

The record of Alberta's dairy operations for 1933 presents a more cheering picture than that of the previous year, with its continued decline in price levels. There was, on the one hand, an increase of $2\frac{1}{2}\%$ in the estimated volume of milk production and, on the other, an increase of 9% in its value. The total output of dairy products is valued at \$12,950,000, an increase of 9% over the previous year. The butter production (creamery and home dairy) reached a total of somewhat more than 36,000,000 pounds. The creamery production alone showed an increase of $13\frac{1}{2}\%$ in volume and 8% in the reported average selling price per pound, the latter figure corresponding very closely with the increase in the price paid by the creameries to the cream producers for butterfat in cream.

The year's output of cheese and ice cream was slightly smaller in volume than that of 1932.

The very considerable increase in the creamery butter production of Alberta and of other provinces during the summer months made it apparent by midsummer that some of the current surplus butter should be shipped out of Canada in order to ensure a fairly stable home market and price level for the approaching autumn and winter—the season of high production costs.

The Dominion Dairy Commissioner reports that in 1930 the equivalent of more than 97% of Canada's entire production of dairy products was consumed in Canada, leaving an exportable surplus equivalent to slightly less than 3%. He also reports that during the part of 1932 when the Canadian butter market was on an export basis, out of each 40 pounds of butter made approximately one pound was exported, and this one pound exported held the price of the other 39 pounds to an export basis. A somewhat similar situation developed during 1933.

As no special organization has as yet been set up to undertake the handling and export of a seasonal surplus of butter, the principal creamery operators of the Western Provinces entered into an arrangement whereby each operator undertook to supply a more or less definite quota of butter for export to Great Britain during the months of August and September. Financial losses were probably incurred in this process, but there seems to be no doubt that this action on the part of the western creamery operators had the effect of stabilizing the home market, and was largely responsible for the relatively good prices that have been paid for butterfat in cream for the past several months. This higher price level has in turn encouraged farmers to give better attention to their milking stock, and to maintain their seasonal rate of production.

According to the latest census returns the production of butter in the home dairies of Alberta amounted to 11,852,112 pounds in 1930. Of this quantity 2,554,410 pounds, or 21.5%, was reported sold off the farms. It is estimated that there was an output of 12,500,000 pounds of home-made butter in 1933.

The Bureau of Statistics reports that 133,096 pounds of cheese was made in the home dairies in 1930. The bulk of it, 83%, was reported from census divisions 10, 13 and 14, areas situated north and east of Edmonton.

As nearly one-half of the quantity of cheese consumed in Alberta is imported from other places in the course of a year, and in view of the present comparatively low price of milk and high price of cheese purchased by retail, it would seem that the making of more cheese in home dairies would be a good way of utilizing a portion of the milk produced there, and supplying the farm family with a very desirable and nutritious food product at a reasonable cost.

A summary of the production and value of Alberta's dairy products for the years 1933 and 1932 is presented in the following table. Some of the causes of the principal variations in the volume of production and the improvement in the prices, are discussed in connection with some of the tables that appear elsewhere in this report.

QUANTITIES AND VALUES OF DAIRY PRODUCTS, 1932 AND 1933
1933 (Preliminary)

	Pounds.	Price, cents.	Total Value.
Creamery Butter (96 Creameries)	23,852,350	18.1	\$4,308,962
Factory Cheese (11 Factories)	1,437,387	10.4	149,593
Other Dairy Products (x) .....	.....	.....	8,491,445
Total Value.....	.....	.....	\$12,950,000

1932

Creamery Butter (95 Creameries)	21,016,048	16.71	\$ 3,512,685
Factory Cheese (12 Factories)	1,439,715	10.15	146,177
Other Dairy Products (x) .....	.....	.....	8,191,138
Total Value.....	.....	.....	\$11,850,000

(x) Including milk and cream for direct consumption; ice cream; home-made butter and cheese and skimmed milk.

Although the details of the quantity and utilization of the cows' milk produced in the Province are obtainable only for the census years, it is estimated on the best obtainable data that for the year 1933 the cream of 63% of the total milk production of 673,000 tons was made into butter in creameries and home dairies, nearly 2% was made into cheese and ice cream, 25% was consumed as fluid milk and cream, and the remaining 10% used on the farms for the feeding of calves and other live stock. Besides, some 355,000 tons of skimmed milk and a large quantity of buttermilk were retained and used on the farms.

LICENSES AND PERMITS.

Applications were received during the year for one permit and 14 licenses in Form "A", for milk and cream testers; 179 licenses in Form "B" for cream graders and testers, and 104 licenses in Form "C" for dairy factories, under the provisions of the Dairy-men's Act and Regulations. The prescribed fees paid for these licenses amounted to \$904.00.

Eight permits were also applied for and granted to cover the transfer of cream under specified conditions, from one creamery to another, for manufacturing purposes.

CREAMERIES AND CHEESE FACTORIES.

There were 96 creameries in operation in the Province during the year, and their reports to the Department show that they manufactured 23,852,350 pounds of butter, an increase of approximately 13½% compared with the previous year's production, and an increase of nearly 4% over the output of 1931, the former peak year. The 11 cheese factories reported an output of 1,437,387 pounds of cheese, a slight decrease under the 1932 output. The manufacturers of ice cream reported a 9% decrease in their year's production.

The creamery that had been operating at Youngstown and the cheese factories at Ponoka (Wheeler's) and Warburg, were not re-opened in 1933. Two new creameries were put into operation in Calgary in the early part of the year by the Alberta Produce Co., Ltd., and the Maple Leaf Creamery, Ltd., respectively. A cheese factory was also put into operation at Falher.

ANALYTICAL SERVICE.

In the continuation of the analytical service from former years, samples of 2,432 churnings of creamery butter were tested for moulds and yeasts, and the findings reported to the operators of the creameries concerned. A considerable number of samples were also analysed for moisture and salt contents, as well as for moulds and yeasts, in connection with the Calgary and Edmonton exhibitions and creamery butter contests sponsored by the Alberta Dairy-men's Association.

The reports of these analyses, promptly supplied to the creameries, furnish a valuable guidance to the plant workers as to the sanitary condition of equipment, supplies, and working methods obtaining at the plants.

INSTRUCTIONAL WORK.

As in former years, members of the Dairy Branch staff have assisted in the teaching and short course work in the Department of Dairying at the University of Alberta. Instruction has also been given upon various occasions in the manufacture of cheese under home dairy conditions.

GENERAL STATISTICAL DATA.

The following tables show some of the outstanding features of Alberta's dairy operations in 1933 and statistical development during a period of years. Earlier data of a corresponding character have been published in previous annual reports of the Department.

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MONTHLY BUTTERFAT RECEIPTS—ALBERTA CREAMERIES.

	1930.		1931		1932.		1933.	
	Weeks.	Lbs.	Weeks.	Lbs.	Weeks.	Lbs.	Weeks.	Lbs.
January	(5)	571,363	(5)	1,012,049	(5)	1,147,160	(4)	910,323
February	(4)	475,904	(4)	874,529	(4)	872,565	(4)	987,707
March	(4)	568,303	(4)	974,594	(5)	1,214,859	(5)	1,384,627
April	(4)	690,720	(5)	1,642,057	(4)	1,233,053	(4)	1,290,322
May	(5)	1,532,538	(4)	1,843,584	(4)	1,695,211	(5)	2,325,295
June	(4)	2,078,803	(4)	2,427,971	(5)	3,037,045	(4)	2,797,281
July	(5)	2,845,211	(5)	3,230,093	(4)	2,278,974	(4)	2,835,834
August	(4)	2,002,411	(4)	2,246,849	(5)	2,209,263	(5)	2,789,226
September	(4)	1,539,060	(4)	1,754,133	(4)	1,287,573	(4)	1,489,762
October	(5)	1,336,270	(5)	1,433,281	(4)	1,024,563	(4)	1,183,462
November	(4)	811,371	(4)	870,287	(4)	831,199	(5)	1,077,494
December	(4)	735,312	(4)	840,945	(5)	1,011,257	(4)	774,093
Total.....	(52)	15,187,266	(52)	19,150,372	(53)	17,844,088	(52)	19,795,926

MONTHLY AVERAGE PRICES PAID BY CREAMERIES IN ALBERTA PER POUND OF BUTTERFAT IN "SPECIAL GRADE" CREAM FOR FOUR YEARS

	1930.		1931.		1932.		1933.	
	Cents.	%	Cents.	%	Cents.	%	Cents.	%
January	38.0	(3.3)	26.6	(4.6)	18.2	(5.7)	17.4	(4.6)
February	38.0	(3.4)	27.4	(5.0)	13.4	(5.4)	17.4	(5.0)
March	36.5	(4.1)	27.4	(5.5)	16.8	(6.0)	18.1	(7.0)
April	32.0	(5.0)	25.7	(7.4)	16.0	(7.7)	16.2	(6.5)
May	28.0	(8.8)	17.7	(10.4)	12.5	(10.5)	16.6	(11.8)
June	25.2	(14.9)	16.4	(13.7)	11.2	(15.1)	14.4	(14.1)
July	25.0	(16.3)	16.4	(14.6)	10.4	(14.1)	14.4	(14.3)
August	25.0	(14.4)	16.4	(12.7)	15.0	(11.0)	13.4	(14.1)
September	25.5	(11.0)	16.4	(9.9)	17.4	(8.0)	12.4	(7.5)
October	27.0	(7.7)	16.4	(6.5)	17.4	(6.4)	14.4	(5.8)
November	27.0	(5.8)	17.4	(4.9)	17.4	(5.1)	14.9	(5.4)
December	26.5	(5.3)	-9.4	(4.8)	17.4	(5.0)	17.2	(3.9)
The Year	27.4	(100.0)	19.0	(100.0)	14.4	(100.0)	15.2	(100.0)
Six Winter Months	32.0	(26.9)	24.1	(32.2)	16.5	(34.9)	16.8	(32.4)
Six Summer Months	25.7	(73.1)	16.6	(67.8)	13.2	(65.1)	14.4	(67.6)

NOTE: The figures enclosed in brackets represent the monthly percentages of the cream receipts for the year.

AVERAGE TESTS AND GRADES OF CREAM

	1933.		1932.		1931.	
	Pounds.	%	Pounds.	%	Pounds.	%
Cream Received	58,672,769	.....	52,700,124	.....	56,690,198	.....
Average Test		(33.7)		(33.9)		(33.8)
Butterfat:						
Table Grade	456,387	2.3	503,933	2.8	495,750	2.6
I.C. Special Grade..		.....		.....	1,032,752	5.4
Special Grade	13,227,873	66.8	10,643,160	59.7	8,784,246	45.8
First Grade	5,447,121	27.5	5,821,276	32.6	7,502,448	39.2
Second Grade	648,058	3.3	854,159	4.8	1,280,569	6.7
Off Grade	16,487	.1	21,560	.1	54,607	.3
Total.....	19,795,926	100.0	17,844,088	100.0	19,150,372	100.0

MONTHLY GRADING OF CREAM

The following table is inserted here for the purpose of showing in percentage, month by month, the classification of the cream received by the creameries during the year 1933:

Months.	Weeks.	Table Grade.	Special Grade.	First Grade.	Second Grade.	Off Grade.	Total.
January	4	4.1	79.1	14.0	2.7	.1	100.0
February	4	3.7	81.9	12.0	2.3	.1	100.0
March	5	3.2	79.1	15.1	2.6	....	100.0
April	4	2.5	77.0	18.1	2.4	....	100.0
May	5	2.2	66.7	27.4	3.6	.1	100.0
June	4	1.7	61.5	32.5	4.2	.1	100.0
July	4	1.4	58.3	36.3	4.0	....	100.0
August	5	1.5	56.8	38.1	3.6	....	100.0
September	4	2.0	63.2	32.1	2.7	....	100.0
October	4	2.6	66.3	27.9	2.9	.3	100.0
November	5	3.6	72.5	21.0	2.6	.3	100.0
December	4	3.6	81.2	13.1	2.0	.1	100.0
Average for year		2.3	66.8	27.5	3.3	.1	100.0

DEPARTMENT OF AGRICULTURE

DAIRY STATISTICS, ALBERTA

MILCH COWS

Year.	Cows.	Year.	Cows.
1901	46,101	1926	486,500
1906	101,235	1927	380,000
1911	147,687	1928	344,495
1916	277,324	1929	345,566
1921	432,838	1930	348,297
1922	392,037	1931	385,000
1923	410,242	1932	424,000
1924	433,528	1933	406,520
1925	460,722		

TOTAL ANNUAL VALUE OF DAIRY PRODUCTS.

1900	\$ 546,476	1924	23,208,562
1910	7,855,761	1925	23,002,000
1915	15,895,586	1926	21,820,000
1916	18,466,311	1927	20,750,000
1917	24,794,597	1928	20,350,000
1918	27,500,000	1929	20,750,000
1919	31,625,000	1930	18,675,500
1920	34,000,000	1931	15,750,000
1921	25,500,000	1932	11,850,000
1922	22,950,000	1933	12,950,000
1923	22,975,000		

CREAMERY BUTTER PRODUCTION.

	Creameries.	Lbs. of Butter.	Selling Value. (cents per lb.)
1920	53	11,821,291	\$6,555,509 (55.45)
1921	41	13,048,493	4,543,007 (34.82)
1922	54	15,417,070	5,126,843 (33.25)
1923	75	17,868,853	5,891,186 (32.97)
1924	89	22,339,857	7,059,630 (31.60)
1925	99	19,630,101	6,959,059 (35.45)
1926	99	19,912,466	6,568,280 (32.96)
1927	100	16,179,712	5,765,347 (35.63)
1928	100	14,375,636	5,374,456 (37.38)
1929	95	16,004,463	5,825,247 (36.39)
1930	92	17,716,744	4,968,227 (28.04)
1931	93	22,957,922	4,711,231 (20.52)
1932	95	21,016,048	3,512,685 (16.71)
1933	96	23,852,350	4,308,962 (18.10)

FACTORY CHEESE PRODUCTION.

	Factories.	Lbs. of Cheese.	Selling Value. (cents per lb.)
1920	7	398,750	\$ 110,355 (27.70)
1921	10	930,660	200,478 (21.54)
1922	14	931,992	183,860 (19.73)
1923	13	1,865,608	368,771 (19.77)
1924	12	1,714,790	278,478 (16.24)
1925	14	1,473,835	306,604 (20.80)
1926	15	1,449,983	275,107 (19.00)
1927	12	848,511	170,690 (20.12)
1928	9	722,048	158,404 (21.94)
1929	10	1,001,475	198,047 (19.78)
1930	8	1,035,352	175,392 (16.94)
1931	10	1,040,588	118,390 (11.38)
1932	12	1,439,715	146,177 (10.15)
1933	11	1,437,387	149,593 (10.40)

Report of the Live Stock Commissioner

(S. G. CARLYLE)

Owing to the low prices for grain which have prevailed for the past three years, farmers are turning their attention more and more to live stock production, and many of them have decided that they can market their grain to better advantage through live stock than through the elevator. The marketing of live stock to advantage presents a difficult problem at present prices, and the producer feels he is not getting a fair share of what the consumer pays for his products. At recent live stock meetings this matter was uppermost in the minds of the people and formed a large part of the discussion. If prices were stabilized to some extent at least, it would do more than anything else to help make Alberta the great live stock Province for which by nature she is well adapted.

Horses.—The horse market was greatly improved in the spring of 1933 over previous years, not that prices were so much higher, but there was a much stronger demand, not only from the eastern provinces, where most of our horses have gone in the past, but also from our own Province. Horses are replacing tractors for farm power to quite an extent. Especially is this true in the central and northern districts, where farms are somewhat smaller than the large wheat farms of the south.

In the fall of the year dealers were complaining of the fact that it was hard to go out and buy carloads of good horses for their business, and they anticipate in 1934 a strong demand and an advance in price.

The number shipped out of the Province in 1933 was 16,182 in comparison with 14,546 in 1932 and 24,055 in 1931. Quite a proportion of these were old and useless horses from the range, which were shipped to the Horse Meat Products Company at Butte, Montana.

Heavy draught stallions were in greater demand than for many years, and there is at present a great shortage of high class breeding horses in the Province. All stallions of good or medium quality have been rapidly picked up, and new blood is badly needed, as very few have been imported in recent years. However, we are very glad to report that two Clydesdale stallions were imported from Scotland in November by J. Harvey, of Lacombe. One of these has since been purchased by Mr. Jos. Haggerty, of Olds. The raising of draught horses should be a paying business during the next few years.

Cattle.—The prices for cattle during 1933 were the lowest on record. A large number were fed during the winter under contract, especially in the Lethbridge, High River and Lacombe districts, and quite a number of these were exported to the Old Country. The prices realized were not high, but still made fair returns for

the feed consumed. Had it not been for the high quality of these cattle, and that they were exceptionally well finished, the returns would have been disappointing. There are altogether too many common and poor cattle placed on the market, which has the effect of depressing the price of good cattle.

The export trade took considerably more cattle than the year before, some 52,000 head being exported in 1933, in comparison with 36,500 in 1932; 123,428 head were shipped out of the Province in the year 1933, and 96,701 in 1932. Due to the extreme drouth in the foothills district, and also from Hanna to Medicine Hat, there is a very great shortage of feed, and large numbers of cattle were placed on the market during the fall months, for which there was practically no sale. All markets were congested and all cattle raisers, especially the ranchers, have taken a very heavy loss on their operations.

Just how far the average farmer in the drier areas should be encouraged to raise his own beef cattle is a question. The business is a side line of the farmer, and in comparison with the rancher, whose chief business is raising cattle, his cattle are much inferior, and these inferior cattle affect the price of the high quality cattle of the rancher. Facing these facts it appears that it would be good business in these drier areas to encourage the farmer to feed the ranchers' cattle through the winter months, either on a contract basis or by purchasing them outright. If this were done it would eliminate the shortage of feed in a great many districts, as the farmer would only purchase in the fall enough cattle to consume the feed that he has on hand, and he would not have to purchase feed for his breeding herd or sacrifice them by taking low prices, as is often done.

There was a good demand for pure-bred bulls, and 46 were purchased under The Pure-bred Bulls Purchase Act during 1933. The breeds of bulls were as follows: Shorthorns 39, Angus 5, Hereford 1, and Ayrshire 1. The Dominion Government put out 57 under their Loan Policy.

At the various bull sales there were some exceptionally good bulls offered for sale, but on the other hand there were far too many small breeders, who perhaps have not the means of getting first class herd headers for their herds, and also who are not in a position to feed and care for these animals when they are young, to develop and bring them out in good saleable condition. There are far too many thin bulls offered at these bull sales, and this is largely responsible for the low average price.

Below is a summary of the 1933 bull sales:

EDMONTON BULL SALE		
Breed.	No. Sold.	Average Price.
Shorthorns	76	\$ 81.58
Aberdeen Angus	3	101.67
Hereford	1	50.00
	80	\$ 81.94
CALGARY BULL SALE		
Breed.	No. Sold.	Average Price.
Shorthorns	214	\$ 80.07
Red Polled	2	100.00
Aberdeen Angus	58	100.08
Herefords	364	123.04
	638	\$110.00

LACOMBE BULL SALE

Breed.	No. Sold.	Average Price.
Shorthorns	46	\$75.00
Red Polled	1	50.00
Angus	8	84.37
Herefords	14	87.71
	69	\$ 76.88

Sheep.—In comparison with other classes of stock, sheep have shown as good, or perhaps better, returns throughout the year than any other class. Feeders of lambs through the winter of 1933 received good returns, and the business of feeding the ranchers' lambs is apparently on a sound basis, whether on a contract system or by the purchasing of feeder lambs outright in the fall. Both systems have proved successful from the feeders' standpoint, and large numbers of lambs are again being fed.

The feeding of lambs is being spread over a wider area in the central part of the Province, and is a business which should be encouraged, as the ranchers are not in a position to finish these lambs, and in the past thousands have been fed by packers. There is no doubt that these could be fed much more cheaply by farmers who have their own feed.

The price of rams in the fall of 1933 was considerably better than a year ago. In fact, the Calgary sale was the best in its history. There may have been higher prices in the past, but the demand was keener, and more rams sold than ever before.

Sheep have improved in quality on the farms in this Province very rapidly. This has been due largely to the policy of forming ram clubs and supplying rams to the farmers through this medium.

Production has not reached the point where we have a surplus of mutton, and this accounts largely for the remunerative prices for lambs. Breeding ewes, however, have been disappointingly low, as farmers are in such a position financially that they are not investing in new breeding stock.

The price of wool made a remarkable gain. In 1932 the average price of wool in the northern part of the Province was around 4 cents a pound, and in 1933 it was 11 4-5 cents a pound.

Below is a summary of the 1933 sheep sales held at Edmonton, Calgary, and Lacombe:

EDMONTON SHEEP SALE

Breed.	No. Sold	Average Price.
Hampshire ewes	12	\$ 5.60 ½
Oxford ewes	11	4.25
Suffolk ewes	26	6.87
	49	\$ 5.97
Hampshire rams	60	\$11.42
Oxford rams	60	8.45
Shropshire rams	5	7.00
Southdown rams	1	10.50
Suffolk rams	37	13.57
Cheviot rams	2	14.50
	165	\$10.72

CALGARY SHEEP SALE

Breed.	No. Sold.	Average Price
Shropshire ewes	8	\$ 5.09
Suffolk ewes	79	6.73
Cheviot ewes	3	8.33
Hampshire ewes	45	5.82
Oxford ewes	16	4.81
	151	\$ 6.20
Grade ewes	672	\$ 2.48
Shropshire rams	30	\$ 9.97
Southdown rams	11	15.27
Suffolk rams	125	22.38
Cheviot rams	4	20.25
Hampshire rams	108	18.03
Oxford rams	26	13.48
	304	\$18.56

LACOMBE SHEEP SALE

Breed.	No. Sold.	Average Price.
Suffolk rams	10	\$22.80
Southdown rams	4	10.00
Shropshire rams	2	10.00
Rambouillet ram	1	7.50
Oxford rams	6	12.66
Hampshire rams	56	17.60
64 pure-bred ewes		7.80
323 grade ewes		2.50

Swine.—The one bright spot in the live stock horizon has been the prices realized for hogs during the summer and fall months of 1933. This is in sharp contrast to the low prices received during the latter part of 1932 and the first four months of 1933. The increase in price has been due to a restricted market in the Old Country, whereby imports of other countries were cut down and we were given a preference under the quota system at the Imperial Conference at Ottawa. If the imports of bacon from the other countries continue to be restricted in favour of the British farmer and the Empire countries, there is every reason to look forward to prices maintaining a fairly high level, provided the quality of our hogs are improved so as to meet foreign demand. Alberta holds the key to supplying this quota, as this Province has a larger surplus than any other province in Canada, and the possibilities of increased production are much greater here than in the other provinces, due to the large amount of coarse grains being produced and the favourable climate.

Unfortunately, we are at present producing the lowest quality of hogs of any province in the Dominion, and the Department, in conjunction with the Dominion Government and the various breed associations and packers, are making every effort to improve the quality by various policies and educational work.

The Boar Bonus Policy was passed during the last session. Under this policy the Dominion and the Provincial Governments gave a bonus to high grade boars purchased in the Province after the 1st of August, 1933. This has had the effect of breeders going out and purchasing the very best boars procurable for their herds.

In addition to this, in conjunction with the Federal Government, packers, railways and stock yards, there has been formed what is known as the Brood Sow Exchange Policy, whereby the packers have agreed to allow the Dominion Government graders to pur-

chase any gilts grading select at market price, turning these gilts over to the Provincial Department, who either trade them at the yards for off-type sows brought in by truck drivers, or take them out in the country districts in carload lots, and there exchange them on an even basis for off-type sows. The Industrial and Development Council of Canadian Meat Packers absorb any difference in the loss in the value of the off-type sows, which are shipped to the packer, and the select gilt which the farmer receives. The railways give a special rate for the shipping out of these sows and the stock yards give a special rate for handling charges. The farmers have taken advantage of this to such an extent that there will not be nearly enough gilts available to supply the demand.

Bacon hog meetings have been held in various parts of the Province, and these meetings have been better attended and a greater interest taken than at any meetings held in the country for a number of years. The farmers seem alive to the situation, and are anxious in every way to improve the quality so as to hold this market. While a fewer number of hogs were raised in 1933 than in 1932, practically the same number were marketed.

On account of the high price fewer hogs were killed on the farms, beef taking the place of pork in this respect, so that in the past two years Alberta has marketed around one million hogs each year, but with the increased number of sows bred in the fall of 1933, it is anticipated that there will be a large increase in the marketings of 1934.

There has been a strong demand for all good breeding stock, and at the Calgary sale, boars sold as high as \$50 each.

There was a shortage of boars in the Province, and a carload was brought in by the Federal Government from the Province of Manitoba.

The Department is stressing the improvement in quality rather than any increase in numbers, as it is felt that too many low quality hogs will depress the market, whereas the only means of holding it up is to increase the number of the select grade.

Report of Cattle Feeding Supervisor

(JOHN WILSON, *Innisfail*)

At the beginning of January, 1933, there were on feed under the Red Label Contract, 2,000 head of cattle in feed lots at High River, Okotoks, Lethbridge, Raymond, Coaldale, Barnwell, Glenwood and Picture Butte. All these cattle were well finished when marketed, which commenced with the heavier steers on March 27th and finished with a large shipment of the fed calves, 510 head, on June 10th. All these cattle with the exception of some lacking enough finish were marketed in Great Britain. The results were again satisfactory, showing a return from 50c to \$1.00 per 100 lbs. over Canadian markets. One of the steers in the June shipment returned the highest price of any Canadian steers shipped last year, 7c net at feed lot.

Last spring was the worst year in memory to market fat cattle, and though feed prices were low, many feeders all over Canada suffered heavy losses from low prices for finished cattle.

After a little rise in price of finished cattle in June and July, prices slumped down again till October, when from \$1.75 to \$2.25 per 100 lbs. was the average price in Alberta for good steers off grass. Owing to the dry season south of Calgary and the early frost in the High River district in July, the winter feeding of cattle in the southern part of the Province was badly disorganized this winter.

At a meeting held in Lethbridge in September the feeders and ranchers could not agree on a contract to feed, so the scheme fell through for this season, and except for 200 head put out through the sugar company, very little finishing is being done. The Department moved my headquarters north of Calgary, and after some meetings, feeders' associations were formed at Red Deer, Innisfail and Olds. A total of 700 cattle were put out to finish under a 7c per lb. gain contract. This new district suffered through the late start made, as many had already secured cattle for their feed lot from other sources.

Another difficulty was the bad weather conditions. Deep snow in the south took a lot of the flesh off the cattle before shipment, and the cattle did not go into the feed lots in as good shape as former years. We had very severe weather with low temperature all through December and lots of snow, but so far cattle on full feed have come through very well. Many feeders do not push their cattle enough at the start of the feeding period, and when bad weather comes before Christmas these cattle do not come through in as good shape as cattle on full feed.

When organizing a new district some work must be done the previous summer to enable feeders to build their yards and put water supplies in shape. To ask them to feed cattle in October is

too late for preparation, and many more would have been on feed in the Red Deer and Olds districts if the farmers had known earlier about this feeding scheme and that they were to be given the opportunity to go into it this season.

In conclusion, I would say that the Lethbridge district with normal crops will again have feeders under this scheme, and I expect that the district will come back stronger than ever next year. High River district I will include with the above, and many cattle will again be fed there.

Report of the Superintendent of Fairs

(S. G. CARLYLE)

No grants were paid to Provincial Fairs in 1933, and for this reason only eighteen fairs were held. These fairs were well attended, and the quality of stock brought out was exceptionally good, but it is a question just how long the farmers can afford to fit their stock and bring them out with reduced prize money.

It is earnestly hoped by all the fair boards that conditions will improve to the point where grants can be restored to a limited number of fairs, at least, as it is felt that the holding of fairs has done a great deal to improve the live stock of the Province, and in an educational way it has also been instrumental in setting the proper types of animals to be raised for market. Competition in the showing of live stock in a community has always been an inspiration to the breeder to purchase better sires and in the better care of his stock.

There is no better way in which to interest young people in taking care of stock than in competitions as carried on at the various club shows, school fairs and fairs, and perhaps competitions at fairs have been more responsible for the improvement of live stock in this and other countries than any other factor.

The Province again sent a splendid exhibit to the Royal Show at Toronto, the following carloads being shipped: 3 carloads dairy cattle, 1 carload Shorthorns, 1 carload Herefords, 3 carloads steers, 1 carload of horses, 1 carload of sheep. They made a very good showing, and carried off the following prizes: 2 grand championships, 11 reserves, 8 other championships, 2 specials, 36 firsts, 36 seconds, 21 thirds and 58 other prizes.

Report of Extension Work

(S. G. CARLYLE)

A large part of the extension work of the Province is carried on through boys' and girls' club work. In addition to the organizing and supervising of this work, a large number of meetings were held during the winter months throughout the Province, and field days were held during the summer months. These field days are held at some successful farmer's home, preferably where there is good live stock. They have proved very popular and are attended by large numbers of neighbouring farmers. Addresses are usually given by professors of the University of Alberta and officials of the Department of Agriculture. A few of the successful field days of 1933 were held at the farms of Mr. Charles Ball, Sedgewick; Mr. Alex. Craig, Wembley; Mr. John Gordon, Innisfree; and Mr. Paquette, Donnelly. It is expected that a larger number will be asked for each succeeding year, as the farmer, his wife and family may all attend, and the affair is usually held in the form of a picnic, with the addresses given during the afternoon. The subjects discussed are live stock, field and forage crops, with special reference to the needs of the district in which the field day is held.

In districts where District Agriculturists are appointed, extension work is carried on chiefly by them, and in the other parts of the Province swine and calf club work is looked after by the Supervisor of Swine Clubs and Mr. W. J. Elliott.

Practically all meetings held during the year were well attended, and a keen interest taken in discussions after the addresses were given. The officials of the Department of Agriculture were ably assisted by professors from the University in the Live Stock and Field Crop Branches.

Report of the Recorder of Brands

(S. G. CARLYLE)

During the year 300 new horse brands and 862 new cattle brands were recorded to their respective owners, while 57 transfers were registered. In addition, 1 sheep brand and 3 poultry brands were recorded. Strays numbered 2,465 and renewals 2,508 (cattle 1,577 and horses 931). The total number of transactions was 6,212.

Compared with 1932 these transactions show an increase of 55 horse brands, 158 cattle brands, and 1 poultry brand; with a decrease of 2 sheep brands, 49 transfers, 496 strays and 362 renewals.

The number of brands issued to date are as follows: Horse brands 39,465, cattle brands 60,338 (including 7,339 two-character brands), making a total of 99,803.

Report of the Field Crops Commissioner

(E. L. GRAY)

The crop season of 1933 was marked in Alberta by a number of disasters: grasshoppers destroyed a percentage of crop over a large acreage in the south-eastern part of the Province; drought reduced yields in practically all of the prairie wheat belt; frost caused considerable damage in northern and central Alberta and in the foothills area south of Calgary; hail losses were, however, unusually light. The spring season opened most favourably, there being an ample supply of moisture and no difficulty from winds and soil drifting; with a few exceptions in the areas of new settlement, all farmers had ample supplies of seed grain, practically no seed grain relief being required. The midsummer was marked by severe drought and high temperatures, particularly in the southern part of the Province, and an acute feed shortage developed in many districts. Harvesting conditions were normal. The quality of crops in central and southern Alberta was high; that of northern Alberta was low on account of frost. Market conditions improved in comparison to those at the close of 1932; at the close of 1933 street prices at average points approximated 45 cents per bushel for wheat, 25 cents per bushel for barley, and 21 cents per bushel for oats, based on the higher grades.

The estimated production of seven leading field crops in the Province was:

Wheat	94,500,000 bus.	Alfalfa: seed	85,000 lbs.
Oats	72,500,000 "	fodder	142,000 tons
Barley	12,783,000 "	Sugar beets	137,458 "
Rye	902,000 "	Hay and Clover	361,000 "

GENERAL CROP IMPROVEMENT.

Seed Exchange Policy.—In order to distribute the larger lots of improved seed produced by seed growers of the Province, the Department inaugurated at the opening of the year a Seed Exchange Policy. Under such policy the Department of Agriculture paid the freight on carload lots of registered or certified seed grain shipped to localities where it was exchanged for commercial grain. As far as possible only No. 1 seed was used; the No. 2 seed was of such grade on account of general quality, not weed seed content. The grain companies agreed to accept commercial grain, when exchanged for seed grain, at carload price, and to give their facilities for weighing and supervision of the unloading of the cars. Exchange value was based either on the market price the day the order was given, or on the price on the date of unloading of the car. Some confusion existed here, and it is recommended that for any future policies the exchange value be based on the

market price on the date the car is consigned. Prices fluctuated somewhat, but the following averages prevailed:

Wheat	41 cents per bushel
Oats	24 " " "
Barley	28 " " "
(Basis No. 1 Northern and 2 C.W. and 3 C.W. respectively.)	

Seed growers nominated the grain companies which they wished to have unload their seed. The Alberta Seed Growers' Association organization was used for the handling of settlements. In some cases farmers distributed grain locally on the same basis. The exchange value was based on an 8½ cent premium over market price, this premium being compiled by adding 10% of the approximate price of street grain to a 5½ cent cash outlay charge.

SUMMARY OF MOVEMENT

No. of cars shipped	51
Total bushelage: Wheat	50,063 bus.
Oats	24,892 "
Barley	1,661 "
Approximate freight: Wheat	\$2,919.28
Oats	1,410.78
Barley	88.22
No. of farmers participating	\$4,418.28
	984

Marketing of Sacked Grain.—The Field Crops Branch gave a marketing service to the growers of improved stocks of registered and certified seed, and to purchasers of such seed. Sales were effected direct from grower to buyer, and no stocks were stored. The quantities distributed were:

Registered and certified wheat.....	3,014 bus.
Registered oats	2,288 "
Registered barley	127 "
Registered alfalfa	110 lbs.
Sweet clover	62,080 "
Brome	2,775 "
Alsike	300 "

As indicating the opinion held of Alberta seed, two interesting shipments of grain were made during the year: Mr. Nels Linden, Wetaskiwin, supplied six bushels of special Banner oats to Sweden, and Mr. Herman Trelle shipped a special car containing 1,000 bushels of Marquis and Reward to Newfoundland. In the early autumn Russian interests secured 12,000 bushels of Garnet wheat in Western Canada for export to the Soviet Union. Of this the major portion was obtained in the Olds district. Being forewarned of this purchase, and realizing that only one carload of Garnet from field inspected crop existed in the country, the Field Crops Branch purchased such lot of certified No. 1 seed, consisting of 1,600 bushels, grown by Mr. Thos. Jones, Trochu. The shipment was stored in the Canadian Government Elevator, Edmonton, for distribution in 1934 in whatever manner the Government should decide.

District Grain Cleaners.—The portable grain cleaners had a most satisfactory year, the following being approximate services rendered by each:

Cleaner.	Bus. Cleaned.
Fairview	24,285 bus.
Grande Prairie	11,500 "
Lacombe	9,550 "
Strathcona	8,585 "
Vegreville	33,470 "
Sangudo	54,100 "
Debolt	8,000 "
Total.....	144,490 bus.

Field Crops Handbook.—Distribution of the Field Crops Handbook was continued throughout the year, and a reprint was prepared for publication early in 1934.

JUNIOR CLUBS.

Junior clubs in field crop projects were increased in 1933. Co-operating in club organization were the Alberta Wheat Pool (wheat clubs), the United Grain Growers, Limited (oat clubs), the Canada Malting Company, Limited (barley clubs), the Grimm Alfalfa Growers' Association, Limited (alfalfa clubs), the Alberta Seed Growers' Association, and the Alberta Branch, Canadian Seed Growers' Association. Club activities may be summarized as follows:

Crop.	No. Clubs.	Membership.
Wheat	46	758
Oats	31	398
Barley	7	87
Alfalfa	31	309
Corn	1	13
Potato	1	18
Total.....	117	1,583

No. of field days, 31; seed fairs, 47.

Winner, National Club Trip, Camrose Club (Gerald Hutchinson, John Robertson).

Place won in National contest, 3rd.

No. winners efficiency prizes, 96.

The junior club members won 20 prizes at the Royal and International exhibitions. Inter-club classes were provided at the Provincial Seed Fair. The Department of Agriculture, assisted by the Alberta Wheat Pool, plan to pay the transportation of efficiency winners to Calgary during the Provincial Seed Fair for a three-day short course, an enlarged list of prizes and scholarships being provided for such winners. Among the outstanding achievements of the juniors during the year was the winning of the International Oat Championship by Ian Smith, Wolf Creek.

FORAGE CROP IMPROVEMENT.

Seed Distribution.—The Dominion Department of Agriculture continued its policy of the previous year, on a larger scale, of supplying selected farmers with forage crop seeds. The extent of the distribution was as follows:

Crop.	Approx. Acreage
Brome	8,230 acres
Sweet clover	3,600 "
Alfalfa	2,500 "
Western rye	1,150 "
Timothy	500 "
Crested wheat grass	300 "
Alsike	25 "

(No. of participants, 1,186 farmers.)

During the year the Field Crops Branch inspected practically all lands seeded to these crops, reports showing the following standard of success:

No. of participants	1,186
No. of inspections	1,069
Prospects of successful stands:	
Good	50 %
Fair	43 %
Poor	7 %

Publications.—The Branch distributed to all participants in the forage crop scheme and to numerous enquirers during the year, leaflets prepared by Dr. J. R. Fryer, University of Alberta, on "Cultural Methods for Growing Alfalfa in Alberta"; "Cultural Methods for Growing Brome Grass and Western Rye Grass in Alberta"; "Recommendations Regarding the Growing of Crested Wheat Grass"; "Cultural Methods for Growing Sweet Clover in Alberta."

COMPETITIONS AND EXHIBITIONS.

Field Crop Competitions.—No field crop competitions were held during the year except those of the junior club programme.

Local Seed Fairs.—Local seed fairs were held at Lethbridge and Wetaskiwin.

Royal and International Exhibitions.—The Department of Agriculture paid the entry fees at the former and duplicated prize money won at the latter. Shipping costs were paid on exhibits to both exhibitions, return costs not being paid from Toronto. Special honoraria were paid for firsts and championships at Chicago. The record of the Province at these two shows was:

	No. Entries.	No. Prizes Won.	No. Prizes Above 10th.
Toronto	51	35	32
Chicago	68	50	28

Provincial Seed Fair.—The date of the Provincial Seed Fair was set back until February, 1934, and a full record will be included in the following report.

World's Grain Exhibition and Conference, Regina.—The Province was well represented at the World's Exhibition and made a remarkable showing. Following is a summary of the results:

Total number of classes in show	57
Total number of classes with Alberta entries	35
Total number of prizes awarded in classes in which Alberta competed	839
Total number of prizes taken by Alberta	175
Total amount of money awarded in these classes	\$72,118.00
Total amount of prize money taken by Alberta	24,509.00
Total amount money won by Alberta Grain Judging teams...	1,785.00
Scholarships also won to value of	300.00
Grand total of Alberta winnings	\$26,594.00
(34% of possible.)	

WEED CONTROL.

The Department discontinued all weed control work except that of a purely educational nature. Weed Act enforcement was taken care of by regular fieldmen of the permanent staff; one additional man was placed on the staff for six weeks at the height of the sow thistle season to deal with requests for crop destruction.

Two new weeds were placed on the noxious list: Hoary Cress and Leafy Spurge. The Weed Bulletin was reprinted with minor changes. Records show the following work during the year:

Number of Weed Inspectors appointed	27
Number of Municipal Districts appointing Inspectors	67
Total number of Municipal Weed Inspectors appointed	96
Number of Screenings Permits issued	160
Number of cars of settlers' effects inspected	185

GRASSHOPPER CONTROL.

The grasshopper situation was more serious in 1933 than in 1932. The control campaign was one of the largest in the history of the Province. It was most effective, and was planned largely along the lines of that of 1932. The major change was that liquid sodium arsenite was used instead of white arsenic and that molasses was added to the bait as a moisture retainer. Details of the outbreak and control work were:

Crop menaced	3,625,076 acres
Percentage saved	43.7 %
Percentage destroyed	11.3 %
Total bait distributed	17,527,264 lbs.
Number of mixing stations operated	72
Bait supplies purchased: Bran	3,680,445 lbs.
Sawdust	7,131,650 "
Arsenite	13,485 gals.
Arsenic	126,345 lbs.
Caustic Soda	3,895 "
Molasses	283,880 "
Salt	17,440 "

ALBERTA SEED GROWERS' ASSOCIATION.

The officers of the Alberta Seed Growers' Association for 1933 were: President, Jos. R. B. Smith; Vice-President, Mahlon Watson; Directors, R. Cochrane, Bert Church, Edmund Soderstrom, R. R. Baird, C. C. Gillies, and E. L. Gray; Secretary, E. H. Buckingham.

ALBERTA POTATO GROWERS' ASSOCIATION.

The officers of the Alberta Potato Growers' Association for 1933 were: President, F. T. Rickett; Directors, R. C. Dowdell, Chas. W. Scott, J. A. Bradley, Chas. Ball; Secretary, E. H. Buckingham.

PROVINCIAL SEED BOARD.

The Board held two meetings during the year. Members were: Messrs. G. M. Stewart, H. A. Craig, O. S. Aamodt, W. H. Fairfield, Jos. H. B. Smith, and E. L. Gray, Secretary.

AGRICULTURAL RELIEF.

Seed Grain Relief.—Very little seed grain was distributed as relief during the year. A small distribution was made in the area of new settlement in the Notikewin district. Isolated cases were taken care of in the Bonnyville, Athabasca and Mayerthorpe districts.

Garden Seed Relief.—During the spring, garden seed was distributed to destitute families in various districts. The seed was obtained largely from the School Fairs Branch and packaged in lots sufficient for a family of five. Three types of packages were prepared, according to the district to which they were sent; 620 standard packages were distributed, containing corn, peas, beets, turnips, carrots, cabbage, sweet peas and snapdragons; 750 special packages for settlers in the Peace River district were distributed containing peas, beets, turnips, carrots, cabbage, sweet peas and snapdragons; 762 special packages were prepared for the southern part of the Province, containing corn, peas, beets, carrots, turnips,

cabbage, beans, lettuce and onions. A total of 2,132 families received supplies, obtaining approximately 19,000 individual packets of seed. The distribution was made through the co-operation of R.C.M.P. constables and District Agriculturists.

Shipments of Potatoes and Vegetables to Drought Areas.—In August the Branch arranged to ship to the drought areas of the Province carload lots of potatoes and vegetables. The railways granted free freight on such cars. Distribution was made largely south and east of Hanna. Supplies were purchased in the Edmonton district, prevailing prices being 35 cents per bushel for potatoes loaded in bulk and 1 cent per pound for vegetables. A considerable portion of the supplies were purchased at cost by the farmers receiving them, the balance being distributed on relief. A total of 77 cars were shipped, the number of points participating in the distribution being 33. Of this shipment, 3 cars were donated. A carload of apples was donated by residents of Nelson, B.C., and distributed at Naco.

Free Freight and Fodder Loan.—Owing to severe drought in districts lying south and east of Calgary the Department formulated a policy of free freight on feed shipments in September, following it by a policy of fodder loan immediately after. The free freight policy provided free shipment of three cars of long feed and one car of threshed grain to farmers or ranchers in the drought stricken areas. The fodder loan policy provided small loans to farmers unable to purchase feed for the live stock necessary to support their homes, such as milch cows, chickens and pigs. The movement of feed under these two policies had reached a maximum of 2,123 cars by the end of the year, consisting of:

	Carloads.		Carloads.
Threshed oats	432	Hay	554
Threshed barley	203	Screenings	34
Greenfeed	554	Beet pulp	346

Seed Oats.—Owing to frost conditions during the growing season there were indications of a distinct shortage of seed oats for 1934. To provide against such a condition the Field Crops Branch securing during the autumn months a reserve supply of viable oats, totalling approximately 100,000 bushels. These were shipped to Canadian Government elevators at Calgary and Edmonton for storing, the railways adding these two points to the special tariff for reduced freight.

Seed Rye.—In order to have available satisfactory stocks of rye for farmers in the drought areas arrangements were made to reserve 10,000 bushels of rye from elevator companies as a reserve seed supply.

GENERAL.

The Field Crops Branch supplied speakers for approximately 200 meetings during the year. The demands for correspondence and office work increased materially. It is estimated that mailings reached a total of 15,000 during the year.

Report of the Provincial Veterinarian

(DR. P. R. TALBOT)

The duties of the Provincial Veterinarian are varied, and include courses of study and instruction at the University of Alberta in connection with the health of animals. The subjects taken up there consist of lectures dealing with hygiene and sanitation, diseases in connection with feeding and nutrition, diseases and their prevention, with particular attention to those occurring in the live stock in the Province, and instructions on unsoundness of the horse. In addition, this Branch has paid particular attention during the past twelve months to settlers and farmers in outlying districts where the services of veterinarians are not available, and where great losses occurred due to influenza in horses, hemorrhagic septicemia, abortion and blackleg in cattle, and various swine diseases. We have also the supervision and care of the live stock at all the Government institutions. We are likewise carrying on investigational work in connection with tuberculosis and contagious abortion in the herds at some of these institutions.

RESEARCH AND INVESTIGATIONAL WORK.

We have under observation at several Government institutions experiments in connection with tuberculosis and diseases of the reproductive organs. We are experimenting with these animals, but their health is not being jeopardized in any way, and we are at the same time gaining knowledge that will be, in our opinion, most valuable to the live stock men of Alberta.

MEETINGS IN OUTLYING DISTRICTS.

During the past twelve months we have held a considerable number of meetings in sections where there are no veterinarians, and where we were asked to speak to settlers who were having losses among their live stock, and who were in such financial shape that they could not secure the veterinary services in any other way than through Government assistance. We have endeavoured to help these people in every possible way, and through our efforts we believe that many losses have been prevented.

INFLUENZA IN HORSES.

This disease is particularly prevalent in the outlying districts north of Edmonton. It is occurring most frequently in those animals that have been brought in from southern districts or from outside the Province of Alberta. It is generally considered that climatic conditions tend to promote the disease. We realize the difficulties that new settlers have to contend with, in the way of providing proper care for horses, when establishing themselves on

wild lands, but a certain amount of these losses could be prevented by keeping the horses away from sloughs, where water has been stagnant for a long time, and which contain decayed vegetable matter from many sources. Men who have provided their animals with water that is uncontaminated have not had the losses to the same extent as those who have paid little or no attention to this important phase of the problem.

HEMORRHAGIC SEPTICEMIA.

This disease has been particularly prevalent during the past few months, and the severity of the weather during the month of December no doubt had much to do with same. Unfortunately the most severe losses occurred in districts where the disease had not previously been noticed, and on account of the stockmen not being familiar with the symptoms, the loss was therefore more extensive than it was in those sections where preventive measures had been taken before winter feeding had commenced. At various times throughout the year articles in the press describing the cause, symptoms and prevention of this trouble have been published, and at live stock meetings attention has been drawn to the disease and the losses resulting from it. In spite of this publicity, it is surprising to notice how few farmers understand the effects of such an outbreak. In districts where the services of a veterinarian were available, we strongly advised the securing of same, for serious losses have occurred due to mistaken diagnosis, and animals were frequently vaccinated with blackleg vaccine in the supposition that this was the cause of the trouble, while it was really due to Hemorrhagic Septicemia. I might also draw your attention to the fact that recently suspected cases of Coccidiosis have been reported to me. So far we have not been able to detect this disease, but we understand that it is occurring in other western provinces. I mention this here, for it may be an additional problem that we will have to face within a short time.

ALFALFA AND SWEET CLOVER POISONING.

We have investigated several cases of alfalfa and sweet clover poisoning during the past year, and numerous inquiries have been sent to this office asking if this kind of forage is injurious to horses. From our observations we believe some losses have resulted, through pasturing animals on both alfalfa and sweet clover, as well as by the feeding of this when cured as hay. There is considerable doubt whether the trouble is caused by the toxic effects of the plant, after chemical changes have taken place in the digestive tract, or whether the condition may be brought about by the presence of a mould in the plant itself. The variation in the symptoms would lead one to suppose that one or both may be a factor in producing the trouble. It is interesting to note that our suspected cases of alfalfa and sweet clover poisoning in this Province differ somewhat from the results of those sent to us by investigators in eastern Canada. For the amount of this feed used, we are getting an astonishing number of cases reported. This might be attributed to the fact that we frequently have difficulty,

particularly in northern Alberta, in curing this class of forage, as rains are frequently prevalent during our haying season. This would result in moulds occurring. It is our impression at present that in this Province the symptoms are confined largely to eye troubles, external swellings in different parts of the body, and nervous excitement. The outcome depends largely upon the situation of the lesions, and if important internal organs are affected the animal usually succumbs. If, however, the symptoms are only superficial and the animal is removed at once from the pasture, or the hay is taken away immediately, recovery quickly takes place.

SWINE DISEASES.

In connection with this class of live stock, numerous cases of Hemorrhagic Septicemia have been reported. There is no doubt that this disease is increasing in Alberta, but if handled properly, it can be eliminated to a very large extent. It would appear also that swine parasites are on the increase, especially in some districts. However, it is a noticeable fact that many swine men are becoming familiarized with the method of handling this situation, and are making a careful study of swine sanitation as a preventive against the trouble.

Report of the Stallion Enrolment Branch

(DR. P. R. TALBOT)

In submitting my report in connection with the Stallion Enrolment Branch, I would like to draw your attention to the increase in the enrolment of stallions over last year, as well as to the greater number of enrolments for one heavy draft breed, as shown by our records in the tabulated list given below. Many of our stallions are of such an age that they will soon have to be retired, and the number of young stallions coming on to replace them is noticeably small. The clubbing scheme for stallions, as carried out by the Department of Agriculture, Dominion Government, is of great value and of beneficial effect in certain sections of this Province. However, many small farmers in the outlying districts cannot organize clubs, or aid in financing such a scheme, with the result that many nondescript stallions will be used in spite of every effort to encourage the high class of stallions that we were hoping could be maintained. It should be kept in mind that many of the settlers in new districts had been farming previously in other parts of the Province, and when they transferred their effects they naturally took only the best horses they had, with the result that the class of animal is very much superior to what many suppose in these localities. It can naturally be assumed that if the services of good stallions were available at a very nominal fee, eventually those sections would be supplying a desirable type of horse to our markets. This problem is one of the most important pertaining to live stock, as I see it, and should receive the most careful consideration of our Government.

LIGHT-HORSE BREEDING.

I would also like to draw to your attention the number of thoroughbreds enrolled last season. Light-horse breeding in this Province is steadily increasing and, judging by the popularity of the meetings held in connection with this class of horse, it would be indicated that it is a sound and profitable business in Alberta. To prove this, I have only to draw attention to the increasing number of people attending the race meets at both Calgary and Edmonton, the increase in the number of riding schools in both these cities, and to the desirability on the part of some to secure a medium-weight horse that can do light work on the farm and also be used in transportation services where roads are not suitable for cars. All these are having some effect in stimulating light-horse breeding. We have several thoroughbred stallions in Alberta that are under a Dominion Government policy, and they are having a most beneficial effect in the improvement of this breed of horse. The horses bred in Alberta have competed successfully on race tracks, not only in Canada, but in the United States as well. It

would appear as if our Province could look forward with considerable pride and satisfaction to the attainments of our breeders of the thoroughbred horse. We have several things that make this Province outstanding as a breeding ground for thoroughbreds, and eventually these facts will become manifest. When the financial situation improves this industry will develop; for, in the domain of sport, the horse reigns supreme.

The following is a list of the stallions enrolled during the years 1932 and 1933, according to breed:

	1932.	1933.		1932.	1933.
Percheron	246	261	Standard Bred	3	7
Clydesdale	135	126	Suffolk Punch	6	5
Belgian	84	85	American Saddle	2	3
Thoroughbred	18	25	Jack	1	1
Shire	18	16			

Report of the Farms Branch

(J. F. ANDREW)

At the commencement of the crop season in 1933 conditions were very favourable. There was an ample supply of soil moisture and practically no soil drifting occurred. Progress at Olds and Vermilion was delayed by wet weather, making some of the spring sown crops rather late, but in every other respect conditions during the early summer were very satisfactory. In July a dry period set in which reduced yields to some extent on all farms, and with the addition of a grasshopper plague caused an almost complete failure at Youngstown. The total production of field crops was as follows:

Oats	21,578 bushels	Alfalfa	170 tons
Barley	2,678 "	Tame Hay	235 "
Wheat	3,222 "	Greenfeed	200 "
Ensilage.....			480 tons

Commencing April 1st the farms and equipment at Claresholm, Raymond and Gleichen were leased on a crop share basis. Live stock and equipment at Youngstown has been disposed of or removed and operating costs reduced to the lowest possible level. The remaining farms at Olds, Oliver and Vermilion continue to be operated on the same basis as in former years.

An increased number of organizations have held field days at Provincial Farms during the past summer. Live stock breeders' clubs, junior clubs and community organizations have availed themselves of the facilities offered for this type of gathering, and have arranged valuable educational programmes, using the farm live stock and field crops as demonstration material.

The area devoted to pasture and forage crops has been increased to meet the needs of the herds and flocks maintained on these farms. In this connection special mention might be made of the alfalfa and grasses. The alfalfa acreage has been steadily increased from year to year, and production has been very satisfactory. Co-operating with the Provincial Seed Board, an effort has been made to produce seed of crested wheat grass and creeping red fescue. During the past year 620 pounds of the latter was produced at Olds, the greater part of which has been turned over to the Provincial Seed Board. It is hoped that a considerable amount of seed of these two valuable grasses will be produced in the next season. In addition to seed produced these areas have been valuable to the public as demonstration plots.

All live stock has made satisfactory progress during the past year. One hundred registered animals were sold to farmers in the Province; 180 were sold through the ordinary market channels, and 94 were slaughtered for use in school dormitories, boarding houses and at the Oliver Mental Hospital. A brief record of the live stock at each farm follows:

OLDS.

Three herds of pure-bred cattle are maintained, namely, Shorthorns, Ayrshires and Guernseys. Shorthorns constitute the largest herd. Two imported sires have been used, and the young stock being reared is of good type and quality. The Ayrshire herd sire, South Craig Prince John No. 117855 (27843), was sold to a breeder during the year, and the A.A. bull, Bridgeview Jock No. 121650, purchased. Many of the heifers from South Craig Prince John are nearing the completion of their first lactation period and will qualify satisfactorily under R.O.P. The Guernseys are also entered in R.O.P., and have made some very satisfactory records. The entire production of the dairy herds is consumed in the school dormitory throughout the term.

The Shropshire sheep and Yorkshire swine on this farm gave very satisfactory increase during the year. We were successful in having a number of Yorkshire swine qualify in the Advanced Registry for Swine. The demand for boars and gilts has recently been very keen.

The horses are Percheron, seven of which are registered females. Two foals were reared and six mares bred during the past year.

OLIVER.

The Holstein herd maintained for the purpose of supplying milk to the Mental Hospital has made excellent progress. On the occasion of the Holstein Breeders' Field Day at Oliver last July, the classes of Holstein females used for judging and demonstration purposes received very favourable comment from those present. A number of very satisfactory records have been made during the year, a larger number than usual being in the 305-day class. These records are gratifying in that they indicate not only satisfactory milk production, but regular breeding.

All horses on the Oliver Farm are Clydesdale. Every year a number of foals are raised from registered mares and sired by the stallion Emigrant's Masterpiece (24395), owned by the Department. A number of his fillies have now reached breeding age and are very promising individuals. A two-year-old stallion reared on the farm is being offered for sale. Emigrant's Masterpiece was again placed with the Mannville Horse Breeders' Club during the 1933 season.

With regard to swine, it is of interest that the herd of Tamworths has been reduced in number and a small herd of pure-bred Yorkshires added. The flock of Hampshire sheep has been increased in number, and surplus stock is much in demand.

VERMILION.

The dual purpose Shorthorn herd headed by Neralcam Dominator No. 181833, continues to make favourable progress. The Lavender bred bull, Doune Ladas No. 191666 (222688), was transferred from Olds to Vermilion last year, and is being used on heifers by the first mentioned sire. Four animals were exhibited at the

Royal Winter Fair, and won the following prizes: Bull, Dominator No. 211231, one year and under two, 1st, junior champion and reserve grand champion; heifer, Augusta Dominator 247497, two years and under three, 2nd; heifer, Lady Joan, under one year, 4th; breeders' herd, 2nd; get of sire, 2nd; two progeny of one dam, 2nd.

In the group classes the Vermilion herd stood second only to entries from the herd of Alexander McLaren, of Buckingham, Quebec.

The majority of the horses are grade Clydesdales. There are in addition four registered mares, from which three foals were raised during the past year.

Flocks of Suffolk and Oxford sheep and a herd of Yorkshire swine are maintained on this farm. Surplus breeding stock from these as well as from the poultry flock find a ready market in the district, and have contributed to the improvement of the live stock in the surrounding area.

In addition to the foregoing, it may be stated that live stock at Provincial Farms is used in connection with investigational work in animal diseases under the supervision of the Provincial Veterinarian.

Report of the Poultry Commissioner

(G. M. CORMIE)

The poultry industry, in common with other agricultural lines, is still suffering from a depressed market. However, towards the end of 1933, there was distinct evidence of an improvement in this regard. The price paid farmers for turkeys and market poultry was 15% to 20% higher than the market of 1932.

The exportable surplus of eggs shipped out showed a reduction from 45,842 cases to 39,325 cases. The total imports, all of which came from British Columbia at a time of the year when egg production in Alberta is at its lowest, amounted to only 1,500 cases.

It is interesting to note that during 1933 a brisk trade with British Columbia developed in cars of live poultry as well as in eggs, and later in dressed poultry. It is anticipated that in 1934 a large proportion of the surplus eggs and poultry produced in Alberta will be sold in B.C. This is due to the ideal geographic and climatic conditions of Alberta for the production of poultry, and on account of the ample supply of cheap feed as compared with the high price of feed in B.C.

The British Columbia market promises to be a remunerative one for surplus Alberta poultry. The following table shows in detail the imports and exports of poultry and eggs out of the Province for the year 1933:

EGGS	
IMPORTS:	
British Columbia	Cases 1,500
United States of America	"
Total.....	" 1,500
EXPORTS:	
Fresh Extras, Grade A	Cases 7,535 5/6
Fresh Firsts, Grade B	" 12,101 1/3
Fresh Seconds, Grade C	" 16,416 1/3
Storage Firsts, Grade B	" 980
Storage Seconds, Grade C	" 1,971
Pullet Extras, Grade C	" 22
Fresh Cracks	" 350
Total.....	" 39,325 1/2
Exports of eggs	Cars 87 1/3
Exports of turkeys	" 52 1/8
Exports, other poultry	" 11
Uninspected eggs (L.C.L.)	" 30 1/2
Uninspected turkeys (estimated)	" 42
Uninspected other poultry	" 22
DETAILS—EXPORTS OF POULTRY:	
Turkeys	Lbs. 1,042,500
Other poultry	" 220,000
	1,262,500

Four carloads of dressed poultry, chiefly turkeys, were exported to the British market. While final returns have not yet been received, it is reported that the sale of approximately one million pounds of Western Canadian turkeys was entirely satisfactory, and brought a net price to the shippers above that which obtained on the local markets. The quality was good and the shipment was well received by the export trade.

The total poultry population of Alberta was 7,609,220, made up as follows:

Turkeys	586,090
Geese	102,110
Other fowl (over 6 months)	3,488,780
Other fowl (under 6 months)	3,327,510
Ducks	104,730

ROYAL SHOW, TORONTO.

For a number of years Alberta has sent a small but comprehensive exhibit of small poultry and turkeys to the Toronto Royal Show. Each year this exhibit has brought distinction to the Province. For the past three years particularly the turkey exhibit has been outstanding, bringing to the Province the Grand Championship for the best turkey in the show, including all breeds. It is interesting to note that three different birds from three different breeders have won this coveted award.

At the 1933 Royal, Alberta, with an exhibit of twelve turkeys, won the following prizes: Grand Championship, 1st Adult Tom, 1st Young Hen, 2nd Young Hen, 3rd Young Hen, 1st Young Tom, 2nd Young Tom, 7th Young Tom, 2nd Yearling Tom, 4th Yearling Tom, 5th Adult Hen.

TURKEY IMPROVEMENT POLICY.

Great progress has been made in the quality of the flocks of turkeys in the Province since the commencement of the turkey improvement work in 1927. The policy of the inspection and banding of breeding stock in co-operation with the Alberta Bronze Turkey Breeders' Association has worked out satisfactorily, both to the producers and to the Department.

That progress is being made in the building up of the turkey flocks of the Province is indicated in the quality of market turkeys offered for sale, and particularly by the prizes won by members of the association at the local shows and at the Royal Agricultural Winter Fair at Toronto.

The reputation of Alberta turkeys is known far and wide, and shipments of breeding stock are made to most of the provinces in Canada, as well as to United States, South America and New Zealand.

POULTRY PROMOTION.

There are three main schemes undertaken by the Alberta Department of Agriculture for the promotion of the poultry industry. These are known as the Alberta Accredited Flocks, the Alberta Approved Flocks (undertaking the 100-Day Winter Trapnest Test), and the Turkey Improvement Policy.

The general interest in poultry raising continues to increase, and since farmers are now able, with good feeding, breeding and housing methods, to obtain profitable production during the cold winter months, they are more and more finding poultry a valuable and profitable sideline on their farms. Many instances are recorded where flocks of 200 to 500 birds constitute the greatest source of cash income on the farm.

The number of groups of Accredited Flock breeders has increased during the year, and at the present time there are approximately 85,000 pure bred-to-lay breeding hens included in this branch of activity.

Those farmers taking part in the 100-day winter trapnest test find this branch of work useful in building up their flocks, and the local hatcheries, which now have a capacity capable of supplying the requirements of the Province, draw their egg supply chiefly from the Approved and Accredited Flocks and from R.O.P. and registered flocks working under the supervision of the Dominion Department of Agriculture.

LECTURES, DEMONSTRATIONS AND LITERATURE.

During the year a large number of poultry lectures and demonstrations were provided in different parts of the Province, and poultry inspectors attended many of the agricultural field days and short courses. In the fall of 1933 a definite effort was put forward to demonstrate up-to-date methods of killing, dressing and preparing poultry for market. In certain sections of the Province, along a given line of railway, demonstrations were provided at different towns in an endeavour to interest the farmers in fattening their poultry before killing them, and in the proper methods of killing, dressing and packing for shipment.

Bulletins and pamphlets dealing with the housing, feeding and management of poultry were distributed to anyone asking for same, and second editions of one or two poultry bulletins were printed, and one or two new pamphlets made available.

POULTRY FEDERATION.

The Alberta Poultry Federation is now the official poultry organization of the Province, and includes in its membership practically every poultry association in the Province of any standing.

The chief activity of the poultry federation is the issuing of an annual federation catalogue. This is an attractive publication, giving the names and addresses of the chief poultry breeders in the Province and providing reliable information concerning the care and management of poultry. This publication is made available without any cost to the Department of Agriculture.

During 1933 plans were discussed for the setting up of a sales policy by the poultry federation to handle the sales of breeding stock for associations and breeders connected with it. It is under the wing of the poultry federation that the Provincial Poultry Show is held and the exhibit of poultry is sent to Toronto.

POULTRY FARM.

The poultry farm operated by the Alberta Department of Agriculture at Oliver is maintained as a demonstration and experimental farm as well as a supply station for the mental hospital adjoining. It constitutes a source from which farmers of the Province are able to secure good breeding stock, hatching eggs and baby chicks.

The following varieties of poultry are available: Bronze turkeys, Barred Plymouth Rocks, White Plymouth Rocks, White Wyandottes, S.C. White Leghorns, and S.C. Rhode Island Reds. Most of the stock is trapnested, and the highest individual record for the year 1933 was obtained by a Rhode Island Red with a record of 307 eggs.

The poultry farm is co-operating with the poultry branch of the University in the carrying out of experiments. Reports of such experiments are made available from time to time by the Poultry Department of the University.

PULLORUM TEST.

The Pullorum Test for Bacillary White Diarrhoea in poultry is still provided by the Poultry Branch of the Alberta Department of Agriculture to those flocks under supervision in any of the following improvement schemes: Alberta Accredited Flocks, Alberta Approved Flocks, R.O.P. and Registration.

Between 30,000 and 40,000 birds are tested annually. These tested birds constitute the largest source of supply of the better hatcheries in the Province. As a result of the testing of much of the breeding stock, farmers have experienced less difficulty in raising their baby chicks than formerly.

The testing has resulted over a period of four years in reducing the percentage of reactors from 23% in 1931 to 10% in 1932 and 1½% in 1933.

Report of the Provincial Apiarist

(S. O. HILLERUD)

A considerable increase in the honey crop has been noted in Alberta this year, the production being estimated at 1,000,000 pounds, valued at \$90,000.00, as compared with 550,000 pounds, valued at \$44,000.00 for last year. In 1932 Alberta beekeepers spent \$12,473.00 for package bees (Customs valuation), and there is every reason to believe that more was spent in 1933, when many commercial men obtained bees as low as \$1.90, and rarely paid more than \$2.10 per package.

Unusually high supersedure of package queens was reported, and a marked variation in the production of the package bees purchased from different shippers noted. Whether these are due to unfavourable conditions at the point of shipping, en route, when set out, or to some other cause, has not been determined, but when the package men get a return of \$3.00 per colony which in former years gave returns as high as \$10.00, there is reason to suspect that the purchase price of package bees will be slashed somewhere.

The season was satisfactory in the southern part of the Province, but disappointing in the more northerly sections. Someone has said, "Happy the people whose annals are short," and it is enough to say of the south that the four southern census districts obtained an average of 206 pounds per colony.

Of the north, Mr. Chalmers reports: "The past season has been filled with disappointments for beekeepers in the Edmonton district. The summer started off full of promise, the dandelion and willows built up nicely for the main flow, which is chiefly fireweed and sweet clover. The clover pastures gave a fair flow, but were not reliable. Where swarming was kept under control a surplus up to 200 pounds was obtained, but this was not general. Bees were robbing and difficult to handle for the greater part of the summer." Mr. Chalmers further reports an apiary of 25 colonies which in the fall had only obtained 25 pounds per colony.

Mr. D. A. Andrew, who is in charge of the Vermilion apiary, reports a lower yield from his scale hive, and indicates a flow as irregular as last year, bearing out Mr. Chalmers' statement that the flow in the north was unreliable. All of which would show the need for instruction in the handling of colonies in the face of short, heavy flows. This apiary was the means of definitely bringing out the nature of the northern honey flow.

At the Olds School of Agriculture, where three hives were packed away for winter in 1932, only one came through alive. The stores in this one were low, so it was fed for a couple of weeks until a supply of food was obtained naturally. This hive made an excellent record during the season. Practically nothing was gathered during May, as the weather was cold and wet. June, however, was more favourable; bright, warm, dry weather prevailing. July

also was dry and warm. In August we had more rain, but plenty of bright weather. Few bees are kept in the immediate district, so this one colony had ample supplies of food within close range. The hive was not kept on a scale so that we have no record of just when the most rapid gains were made. However, the period of gain would appear to have been fairly uniform for the three months—in fact, until well into September, judging by the frequency that supers were required. Early in October 250 pounds of honey were extracted, leaving 40 pounds in the hive. Later in the month the bees of this hive were killed.

The beet webworm appeared in the Brooks area, but not in sufficient numbers to affect the flow. A commercial beekeeper in the Coaldale district informed me that 25 colonies suffered from grasshopper poison, but stated that a change in the formula, omitting molasses, and the steady flow which fortunately carried on throughout the season, prevented further loss.

During the season 226 apiaries were inspected, and a total of 1,899 colonies examined. Exactly 100 cases of A.F.B. were found by Mr. Chalmers and myself. These were destroyed by fire. Some 50 cases of disease were reported from Brooks, but conditions did not permit examination. Other commercial beekeepers reported a total of 37 cases, which they claimed had been destroyed before my arrival. Hasty scouting through the yards, often under adverse weather conditions, failed to show disease, so evidently they had handled the situation fairly well. There is also the possibility that the diagnosis was not correct.

Fifty-seven visits were made to beekeepers, usually at their request, to check abnormal conditions in colonies, or advise regarding management details. Inspections were not carried out during such visits.

A survey of the area within four miles of the Dominion Experimental Farm, Lethbridge, was conducted to determine the total number of colonies, acreage of honey producing plants, and honey yield, with a view to studying the problem of overstocking.

A study of the variation in packages was begun in the Riedel yards. The wide variation, which has been the subject of complaint for years, justifies further investigation. Assistant Professor J. E. Echert, of the University of California, plans to devote a part of his time toward the solution of the problem at the package shipper's end.

Honey grading indicated the Lethbridge crop to be of unusually high quality with little variation between the early and late extractings. Colour is becoming important, as Alberta honey is being used in blending. All commercial men reported an eager market.

One hundred and eight requests were received for the correspondence course in beekeeping during the year 1933. Fourteen meetings were held for beekeepers, with a total attendance of 352. A lecture was also given at the University of Alberta to the farm boys, at which 135 were present.

INSPECTIONS

	Apiaries Inspected.	Colonies Inspected.	Apiaries Infected.	A.F.B.
Chalmers	49	308	6	14
Hillierud	177	1,591	12	86
	<u>266</u>	<u>1,899</u>	<u>18</u>	<u>100</u>

Report of the Game Commissioner

(S. H. CLARK)

BIG GAME.

Alberta is particularly fortunate in having large areas of national parks within its boundaries. Game preserves in which hunting is entirely prohibited also add assurance of the continuous supply of game animals. Surplus stock travel from these game preserves into the forest reserves adjoining, which will supply good hunting for posterity.

Favourable conditions also exist in remote areas outside of the forest reserves. On account of the low prices of domestic stock residents find it more economical to eat beef rather than go to the expense of organizing a hunting trip, which will take them from their homes for several days. However, the areas in the vicinity of settlements are becoming depleted of game, and even the breeding stock is being killed off, or driven back considerable distances from the range of settlement. Perhaps the greatest menace to the preservation of the existing game is a class of settler who has come into the country during recent years. The older residents of the Province know the value of game and exert an influence towards its protection, whereas most of the newer settlers possess high powered rifles and have a tendency to destroy anything which is wild by nature. These conditions are aggravated by the extreme necessity for food in many cases.

In addition to the depletion by humans, the timber wolves have greatly increased during the last few years. The bounty on these pests was removed in 1931, and as the wolves are difficult to trap, and as the fur is coarse and of little value, the trappers will not exert themselves to destroy them.

It is well known that timber wolves kill an enormous amount of game animals, and where game is plentiful they are known to kill when not in need of food. It is also known that the number of cougars are increasing in the western part of the Province, and reliable estimates show that each cougar will kill from 75 to 90 head of game each year.

The extremely hard winter of 1932-33 caused the loss of considerable game. Many moose were found to have died from ticks. It is not known definitely whether these animals became diseased, and from the resultant loss of strength and flesh became the prey of ticks, or whether the ticks were the primary cause.

The Pembina-Brazeau Elk Reserve and adjacent areas were again open for the killing of adult male elk. This hunting has had very satisfactory results in that elk have been scattered, and are now spreading to areas which do not have elk, nor have had for several decades.

There was a decreasing number of hunters in the big game fields during the past season. For a number of years about 75% of the big game licenses have been sold to residents outside of large cities and towns. Farmers throughout the southern and eastern parts of the Province have travelled long distances to enjoy a hunt and relaxation after the harvest season. Many who have afforded this recreation in the past now find the price of farm products too low to afford these trips.

MIGRATORY GAME BIRDS.

Considerable optimism existed in the spring of 1933 in that a heavy snowfall had filled the sloughs and pot-holes to provide breeding areas for the ducks and geese as they migrated north. However, the continuous dry spell, starting in June, created disastrous conditions in the southern part of the Province. Even large lakes which were excellent breeding grounds for ducks became completely dry. The low stagnant water which remained contributed to considerable loss from duck sickness. This botulism, or some other form of infection, was also found to exist in the northern part of the Province, and the losses of ducks amounted to tremendous numbers in the aggregate. The ducks which nested in the southern part of the Province were comparatively few in number, although a fairly satisfactory migration came from the north. In comparison with other years, it is a consensus of opinion that the migration of northern ducks was much less than in previous years.

Due to a heavy snowfall at the end of October, the open season for shooting migratory birds was considerably shortened, with the result that the total number of ducks killed in Alberta last fall was much less than the average of previous years. Conservationists in the United States are becoming alarmed at the shortage of duck supply, and it is expected that the privileges of the American sportsmen will be greatly decreased during the next season.

UPLAND GAME BIRDS.

The ample supply of rabbits provided the main diet for the goshawks, great horned owls, and snowy owls. These are the main predators of the upland game birds, and as a result the grouse and Hungarian partridges showed considerable increase. The sharp-tailed grouse (prairie chicken), ruffed grouse, spruce partridge and ptarmigan are known to have a cycle. This cycle is influenced by the supply of food of predatory birds and animals. When the rabbits die off, and such food becomes scarce, the game birds are decreased rapidly by their natural enemies.

The open season on prairie chicken, ruffed grouse, spruce partridge, ptarmigan and Hungarian partridge, provided an excellent variety of shooting during the past autumn. The prairie chicken have become comparatively scarce in the south-western part of the Province, and it is anticipated that a close season will be necessary in that district in the near future.

The Hungarian partridge, being a prolific and active bird, continues to increase, and it is hoped that no period of scarcity will be experienced by these splendid birds.

The pheasants survived the extreme cold weather much better than was anticipated, and for some unexplained reason the cock pheasants are in much greater numbers than the females in most of the districts where they have been liberated. The liberation of several hundred hen pheasants in some areas will, no doubt, greatly improve the existing conditions. A surplus of male birds tend to interfere with successful hatching, hence a proper balance of sexes must be maintained if we are to expect a satisfactory increase.

FUR-PRODUCING ANIMALS.

Records show that fur-producing animals also have cycles of plenty and scarcity. The food supply has much to do with the increase in the predatory animals. Prior to the last decade, before the use of wire snares became prevalent, we were assured of a continuous supply of this great national resource. At that time the Indians were not seriously molested by the white trappers and trapped only sufficient for their immediate needs. In lean years when the cycle was at a low ebb, most of the Indians were too indifferent to exert themselves to do much trapping. This actually effected considerable conservation of the breeding stock. However, conditions have changed so as to upset the balance which was maintained in the early days. We now have large numbers of unqualified trappers seeking this mode of life in preference to accepting relief from the Government or municipality. These invaders into the fur territory take with them quantities of wire snares, and the use of these snares has become so general, even amongst the Indians and half-breeds, that much fur is being destroyed. A considerable proportion of these snares are never picked up, and being left throughout the spring and summer, it is found that alarming numbers of fur and game animals are caught and have the inevitable fate of starving to death. It is expected that conditions will be created to control this alarming situation.

The number of fur-producing animals exported from the Province from July 1st to June 30th, 1933, was about 70,000 pelts in excess of the previous year. This increase is accounted for by the increase in the number of squirrels taken, and also by the increase of the product of the licensed fur farmers.

The value of the fur exported increased to a total of \$1,074,886.61. This is an increase of \$187,550.00 over the previous year.

DEPARTMENT OF AGRICULTURE

ALBERTA FUR PRODUCTION FOR THE YEAR JULY 1, 1932-JUNE 30, 1933.

Kind of Fur.	Total No. of Pelts	Aver. Value per pelt.	Total Value.
Badger	1,068	\$11.50	\$ 12,282.00
Beaver	9,279	8.00	74,232.00
Wolverine	14	5.25	73.50
Ermine (Weasel)	267,461	.48	128,381.28
Otter	156	12.45	1,942.20
Lynx	1,987	16.15	32,090.05
Marten	862	14.00	5,068.00
Skunk	8,865	.60	5,319.00
Bear	298	2.75	819.50
Fisher	4	50.00	200.00
Fox (Silver, Black)	11,833	28.25	275,117.25
Fox (Cross)	3,641	25.00	91,025.00
Fox (Red)	7,310	11.35	82,968.50
Fox (Kit)	3	1.25	3.75
Fox (White)	41	18.96	777.86
Fox (Blue)	387	16.45	6,366.15
Fox (Bastard)	7	.....	.....
Mink	8,559	3.90	33,380.10
Muskrat	555,391	.42	233,264.22
Wolf (Prairie)	11,644	5.75	66,953.00
Wolf (Timber)	100	7.00	700.00
Robbit	9,767	.12	1,172.04
Squirrel	316,333	.07	22,143.31
Fitch	320	1.25	400.00
Ground Hog	12	.....	.....
House Cats	182	.20	36.40
Bob Cat	6	.....	.....
Raccoon	34	5.00	170.00
Moose	11	.....	.....
Deer	2	.....	.....
Mole	17	.....	.....
	1,215,094		\$1,074,884.61

The policy of issuing muskrat and beaver permits south of the North Saskatchewan River where damage is being done has been continued. The following are the permits issued and the animals taken:

MUSKRAT AND BEAVER PERMITS ISSUED, 1932-1933.

Muskrat permits issued	181
Muskrat reported taken	10,562
Beaver permits issued	44
Beaver reported taken	119

REVENUE.

There was a general increase in the sale of licenses and in fur tax, and a total gross revenue from the various sources is as follows:

GAME BRANCH REVENUE, JULY 1, 1932-JUNE 30, 1933

Resident bird game	\$24,246.50
Resident big game	15,557.00
Fur tax	74,777.67
Various licenses, etc.	17,872.86
	<u>\$132,454.03</u>
Total Commissions Paid:	
Game licenses	\$ 4,400.08
Fur tax	2,042.66
	<u>\$ 6,442.74</u>

FUR FARMING.

There is every reason to be optimistic for the future of the fur farming industry in Alberta. The climate of this Province seems to be ideally suited for the production of high grade fur. Many farmers who have started fur farming as a side line to agriculture have found their main source of revenue in the sale of the pelts. The number of licensed fur farmers in the Province has now in-

creased to 438 as at December 31st, 1933. The number of animals on the fur farms at this date is as follows:

Badger	26	Fox (White)	9
Beaver	400	Marten	37
Coyote	53	Mink	5,534
Fisher	24	Muskrat	18,156
Fitch	807	Rabbit	348
Fox (Blue)	714	Raccoon	93
Fox (Cross)	1,473	Sheep (Karakul)	110
Fox (Red)	349		
Fox (Silver)	23,079	Total.....	51,212

DESTRUCTION OF CROWS, MAGPIES AND GOPHERS.

This season saw increased activity, particularly by the school children, in the pest competition, and 3,000 prizes were awarded to the competitors. The interest in this competition was such that while the regulations provided for a total of 3,000 prizes, there were over 1,000 in the competition who were below the last authority in the prize list.

The result of the competition shows the following:

Crows and Magpies	48,555	
Gophers	725,253	
Crows' and Magpies' Eggs	201,499	
Total destroyed by school children:	Total destroyed by adults:	
Crows and Magpies	38,085	
Gophers	564,739	
Crows' and Magpies' Eggs	183,930	
	Crows and Magpies	10,470
	Gophers	160,514
	Crows' and Magpies' Eggs	17,569

FUR MARKETING SERVICE, 1932-1933.

There has been a gradual increase in sales of furs by the Fur Marketing Service since it was started. Fur farmers, trappers, and some dealers who have used this service consistently express considerable satisfaction. It is expected that the fur marketing service will continue with increased patronage from its satisfied customers. The season of 1932-33 showed an increase in sales of about 10%. Eventually the sales will increase in volume sufficiently to attract outside buyers, which will give greater service to the trappers and fur farmers in the Province.

FUR MARKETING SERVICE, 1932-1933

Total sales			\$21,066.90
Number of shippers	789	Number of shipments	1,161

Report of the Supervisor of Boys' and Girls' Clubs

(G. S. BLACK)

Junior club activities in 1933 again showed a decided increase over the previous year. The membership of junior live stock clubs increased from 980 to 1,260. New clubs were organized. All of the junior clubs are receiving excellent support in their districts. The raising of good quality live stock is reflected in the higher prices being received and the keen demand for breeding stock. Despite the fact that swine prices reached an all-time low during the past year, we have a decided increase in swine clubs. The quality of the swine club hogs was not as good as formerly. Many members, of necessity, sold their feed during the rise in grain prices last summer, and late threshing prevented the marketing of properly grown pigs. The withholding of grain, and the consequent stunting of growth, was reflected in the grading of many club hogs at market time. Despite this fact, swine club members have a very high percentage of the desirable bacon swine in the Province. Demands for their surplus breeding stock are very large, and they are playing a large part in improving the quality of Alberta hogs.

New swine clubs were organized at Stettler, Three Hills, and Swalwell, under the supervision of Mr. Elliott, who was in charge of all junior clubs in central Alberta during the past summer. Radway Centre organized a large active club in Mr. Pidruchney's district, and two new clubs at Keoma and Gleichen were organized under the supervision of the Dominion Live Stock Branch at Calgary.

One hundred new boars were loaned to club members by the Dominion Live Stock Branch, and a large number was secured from club members for private owners. A high percentage of the fall fairs was judged by Mr. Sheppard, who gave a grading demonstration in conjunction with the fall exhibit of swine.

A very active interest is taken in calf club work. New calf feeding clubs were organized and fairs held at Tofield, Grande Prairie, and Crossfield. At each of these fairs premium prices were received. Special mention should also be made of the excellent showing of beef calves by members of the Sedgewick Club under the supervision of H. W. Scott at the Edmonton Spring Show. Dairy clubs exhibiting for the first time were Alix, Didsbury and Wetaskiwin. In all cases splendid exhibits were shown at these fairs. Special comment should be made of the excellent Holstein exhibits at Bentley and Olds and the Ayrshire calves shown at Red Deer during the past summer.

An increase in the number of field days in connection with junior clubs is noted. Among the larger ones were Lacombe, Sedgewick,

wick, Grande Prairie, Mayerthorpe, Vermilion and Oliver. Many of these days were combined field, poultry and live stock gatherings. Requests have already been received for club days in 1934.

In addition to local club meetings on feeding, care and management, several special gatherings of adults were arranged for. An increase is shown in the number of judging classes held.

The junior live stock judging finals were held at the University Farm on November 1st of last year. Thirteen swine teams competed, and a very close competition resulted. The winning team was composed of Lester Faulkner and Clair Dunbar of the Liberty Swine Club, west of Leduc. In the beef calf club section the Tofield team, composed of H. K. Moen and Jos. Kallal, were adjudged winners, while the dairy team of Tom Clarke and Delbert Levagood of Didsbury stood in first place. All of the teams made a splendid showing at Toronto; the beef team winning second place, the swine team third, and the dairy team seventh place.

The Junior Farm Club Bulletin is issued quarterly to 2,600 members. Items of educational value and club news are published. This bulletin is materially assisting in keeping up the club interest during the winter months.

During November and December I assisted in the Sow Exchange Policy. This work entails delivering carlots of select gilts to country points and exchanging them for off-type sows. On three days of each week exchanges are made at the stock yards. Nearly two hundred exchanges have been made to date. I also addressed several meetings in connection with our boar bonus and sow exchange policies. A large amount of correspondence has been answered in this connection, and much publicity has been given to these new policies through the press and radio.

Much credit is due to the various members of the Dominion Live Stock Branch, Soldier Settlement Board, experimental farms, and the University of Alberta for their splendid co-operation in junior club work at all times.

Report of Director of School Fairs

(G. S. BLACK)

The work of school fairs throughout the Province during the past year has much to commend it. It became necessary early in 1933 to withdraw the agricultural live stock grant, school supervision, book prizes and the assistance of judges, which to many fairs was a very serious blow. I am glad to report, however, that despite such drastic cuts over 92 fairs were held. The Department of Agriculture assisted these fairs by supplying seeds during the Spring of 1933, also entry tags, and at all times keeping in close co-operation with the school fair secretaries.

Secretaries have reported from practically all of our school fair associations. A very earnest attempt is being made to carry on in the majority of districts. The desirability of the continuation of the Scholarship Short Course and the distribution of school fair seeds are very urgently requested by nearly all the associations.

A number of very excellent reports were received. Increased attendance and exhibits were shown at many fairs. Marwayne, Coutts, Coaldale, Okotoks, Wetaskiwin, Crossfield, Willingdon, Clover Bar, Foremost, and Red Deer are among the fairs reporting a very successful fair this year. A number of fairs were compelled to discontinue, due to hail or drought conditions.

Practically all of the school fair associations have held their annual meetings and elected officers for the forthcoming year. Conditions affecting their discontinuance are being considered as only temporary, and as soon as possible they intend to carry on again.

The desire for the continuation of Alberta school fairs is being expressed by all districts, and the hope for future assistance is being continually received.

The work of the School Fair Short Course was continued, and both boy and girl winners in 1932 at their local school fairs were assembled at the Olds School of Agriculture during the month of July. This scholarship consisted of a specially prepared course covering six days. Two hundred and fifty-two pupils were in attendance, coming from as far north as Peace River and as far south as the American boundary. Many requests have been received for the continuation of this splendid work.

Report of the Relief Division

(S. H. GANDIER)

Activities of the Relief Division during 1933, included movement of settlers from the dry areas, movement of stocker and feeder cattle from Calgary and Edmonton stock yards to feeding points, and administration of the Relief Settlement Plan.

Free Transportation of Settlers (moving from dry districts).—Because of numerous requests for free transportation from farmers of the dry districts early in the year, this policy became effective commencing March 15th, and continued to May 31st. During that period 95 families were moved to new locations in approved districts. The general failure of crops throughout the south-eastern section of the Province prompted renewal of the policy on August 1st, and the movement was unusually active to November 15th, during which time 394 families were granted free transportation. The large majority were moved from the area south of the town of Hanna to the Red Deer River and east to the Provincial boundary. Others were from crop failure points scattered throughout the entire south-western portion of the Province.

Total of families shipped out in 1933 was 489, and 857 cars of stock and effects were moved. There was a marked decline in the numbers taking up homesteads, the majority leasing lands or purchasing on easy terms where some acreage was already under cultivation and considerable stock could be carried. Many settled at points in the area from Edmonton east to the Saskatchewan line and south to the Stettler district. Most of the homesteaders located west of the Rimbey-Breton line of the C.P.R. and west and north of Edmonton. Very few went to the Peace River district. Many enquiries were received late in the year concerning free transportation in 1934.

Reservation of Land for Drought Area Farmers.—Because of the difficulty which many of the drought area farmers were experiencing in locating suitable lands for their re-establishment in approved districts, and in disposing of their present holdings in the dry districts, certain homestead lands were set aside by Order in Council on September 21st, and provision made for exchange of dry area farms for reserved lands. The reserved area is described as follows:

All that portion of township 74, range 20, which lies to the south and west of the left bank of Little Smoky River; all those portions of townships 74 and 75, range 21, which lie to the south and west of the said left bank of the Little Smoky River; the whole of township 74 and those portions of townships 75 and 76, range 22, which lie to the south and west of the said left bank of Little Smoky River; the whole of townships 74 and 75, and that portion of township 76, range 23, which lie to the south and west

of the said left bank of Little Smoky River; and the whole of townships 74 and 75, range 24; all of the above lands being west of the 5th meridian.

Reservation of the lands was made too late in the year for immediate settlement, but several parties of farmers representing certain dry area communities were conducted on inspection trips during the fall. These parties were favourably impressed with the country. Sixty reservations were requested subject to applicants establishing their eligibility by disposal of their dry district holdings. Movement to this district will commence in 1934.

Movement of Stocker and Feeder Cattle.—This policy was in effect throughout the year, for movement of cattle from the Calgary and Edmonton stock yards to feeding points in the country. Probably because of continued depressed market conditions, the movement was comparatively small: 254 cars were shipped, totalling 8,463 head, these figures being within a few cars of shipments for the previous year.

Relief Settlement Plan.—The settlement on the land of unemployed families on relief in the cities, towns and other municipalities of the Province, continued in 1933 under the agreement with the Federal Government dated June 20th, 1932. This settlement scheme provides a maximum allowance of \$600 per family, which is shared equally by the Federal and Provincial Governments and the municipality in which the applicant resides, the Province being responsible for administration costs.

The Relief Settlement Board appointed in 1932 continued to function, and 34 meetings of that body or of committees appointed by it were held during the year at Edmonton, Calgary, Medicine Hat, Lethbridge and Turner Valley.

The only city to participate in the settlement plan in 1932 was Edmonton. Early in 1933 it was evident that interest in the scheme was growing throughout the Province. After reviewing the results of the 1932 movement, the city councils of Calgary, Medicine Hat and Lethbridge decided to recommend families for settlement. Some smaller towns and a number of rural municipalities also submitted applications. Applications were also received from ex-oil field workers of Turner Valley, which presented a special problem, since the towns of Turner Valley and Black Diamond were not financially able to pay their portions of settlement allowance. A special policy was arranged to meet the difficulty, whereby the Federal and Provincial Governments agreed to contribute the shares which they would regularly assume under the \$600 plan, maximum available therefore to these families being \$400.

Movement of settlers commenced about May 1st and continued to the end of August. During that time families were placed on the land from the cities and other points as follows:

Edmonton	141
Calgary	96
Medicine Hat	15
Lethbridge	8
Turner Valley	14
Towns and rural municipalities	23
Total.....	297

In 1932 the number of families sent out was 51, and total now placed since adoption of the policy is 348.

Since families are required to secure their own locations, the large majority have settled upon homesteads or other undeveloped lands. Of the full total above mentioned, 241 are on raw lands and 107 on partially or fully developed farms. Homesteaders have settled for the most part on the lines west and north-west of Red Deer and scattered through the district north and west of Edmonton, only 27 having gone to the Peace River district.

During the last three months of the year two field men were working continuously amongst the settlers to inspect progress and advise concerning settlement activities. Reports from these visits indicate that though quite a number may not become successfully established within the period of settlement assistance, and some may fail, yet there are a large number who are making satisfactory progress and are determined to succeed.

Many applications were received too late in the year to be considered for the 1933 movement, and are held over for consideration next season. A still heavier movement under this policy is indicated for 1934.

Report of Alberta Women's Bureau

The Alberta Women's Bureau has during the past year carried out a programme of demonstrations and short courses similar to that made available in former years. Public interest in this type of educational work has been very keen, and reports reaching this office from residents of those districts where courses were given clearly indicate that they were much appreciated. It is a matter of regret that it was impossible to supply demonstrators and speakers in every case where application was made. It is the aim, however, in arranging meetings from year to year that each district will receive as nearly as possible its share of service.

Demonstrations and lectures were given to the Alberta Women's Institutes, the United Farm Women of Alberta, and to a few other community organizations. The following subjects were demonstrated: sewing, foods and cookery, dry cleaning, and interior decoration.

The arrangements made for carrying on this work are as follows: The Department of Agriculture provides the lecturer or demonstrator and pays her travelling expenses and sustenance allowance. The local organizations undertake to advertise the lectures, demonstration-lecture or short course. They provide the place of meeting and some of the equipment (where equipment is required).

The Alberta Women's Bureau work carried on throughout the summer months was as follows:

Number of sewing courses given	28
Total attendance	1,297
Average daily attendance	16
Number dry cleaning and food courses given	57
Total attendance	1,817
Average daily attendance	29
Number of interior decoration courses given	38
Total attendance	1,372
Average daily attendance	31
Total number of places visited	123
Total attendance at all short courses	3,986

The district worker in the Ukrainian settlement in the areas east and north-east of Edmonton reports a very interesting and, we believe, successful year. A complete report of her activities is given separately.

Report of District Worker

(MISS ROMANCHYCH)

The continued necessity for restriction of the expenditures again prevented any extensive expansion in the work.

Due to the late spring, car travelling could not be undertaken in safety until the later part of May. Again, the fall weather was very unsettled (with snowdrifts in October and heavy rains in November) which made it impossible for me to cover my expanded territory thoroughly. For that reason, starting a definite plan of work in the Radway and Smoky Lake districts meant curtailing my work in the Myrnam and other districts east of Vegreville.

As a new piece of work, I held a number of cheese making demonstrations, which proved very popular. There has been between 1,000 and 1,200 pounds of cheese made. I have already promised to hold about 40 classes next year.

The greatest of my efforts centered around the community affairs and helping people to feel happy and contented. This brought me into the homes, and I made about 500 such visits during the season, which opened up a new field of social service.

There were many other services solicited, but they are too varied to mention. Visiting homes in this manner, it also gave me an opportunity to check up on the results of former years' efforts. To my surprise, I found more evidence of modern home-making (i.e., canning, meat curing, pickling, interior decoration, etc.) than I had anticipated.

Throughout the year, excluding the forementioned, I had 408 engagements, made up as follows:

Meetings—annual, monthly, executive, etc.	8
Talks on household science, health	121
Demonstrations and classes in cheese making, pickling, canning, sewing, knitting, etc.	94
Lectures, addresses at public meetings, concerts, anniversaries, etc.....	76
Alberta Women's Bureau meetings re organizing	17
Judging at U.F.W.A. district conferences	2
Judging at various community or local enterprises	11

Report of the District Agriculturists

LETHBRIDGE DISTRICT

(M. L. FRENG)

During 1933 work from this office was carried on along similar lines as in previous years. Inquiries and requests for information and services along various agricultural problems have appreciably increased.

Assistance was rendered in connection with the grasshopper campaign and the weed control campaign.

Requests for more grain clubs, calf clubs and pig clubs have increased, and as a result several new clubs have been organized.

Following a long steady winter, with more snow than usual and an unusually heavy precipitation during April and May, the spring work and seeding was somewhat late. Moisture conditions appeared satisfactory in the spring, but June, July and August were very dry and extremely hot, resulting in reduced yields and a serious feed shortage throughout the ranch districts. A large number of cattle were sacrificed at extremely low prices.

In times such as we have had during the past three or four years cash returns to the farmer and rancher have not covered out-of-pocket cost of production. Naturally the farmers have not been able to make replacements on machinery or the necessary improvements required on their farms. While adjustments and curtailments are being made to meet these conditions, sounder practices are also in evidence. It is pleasing to note that greater efforts are being made generally to improvement around home conditions, and progress is also being made towards producing higher quality in most of the farm commodities.

As in the past this office has rendered services throughout the irrigated districts in connection with surveys to improve the layout of ditches necessary for efficient irrigation, and also in regard to farm planning towards improving home surroundings and the layout for crop rotations.

Considerable time has been devoted to the distribution of seed and feed relief in certain outlying districts of Lethbridge.

Throughout the dry farming areas soil drifting is becoming more serious every year. A careful study has been made of these conditions, and while no fast rule can be laid down to cover all districts it is a problem which has to be studied for each district. But throughout the Lethbridge district, where we have such high winds, and where summerfallowing is necessary to conserve moisture, it appears that strip farming is the most effective check method that has been found to date. This method is meeting with approval in nearly all parts of this district, and wherever this system is followed very little damage has occurred from soil drifting.

Corn growing in the Lethbridge area is greatly on the increase, both under irrigation and dry land conditions. It is without a doubt one of the surest fodder crops that can be grown, providing proper attention is given. With our early improved strains of corn, good yields of matured corn can be successfully raised. I look for this crop to be included in the regular cropping system throughout the southern part of the Province.

The following Junior Grain Clubs were sponsored during the past season: Lethbridge District Wheat Club, Barley Club and Corn Club; Nobleford District Wheat Club and Oat Club; Bow Island District Wheat Club and Oat Club; Claresholm District Wheat Club and Oat Club.

Assistance has been given to all these clubs throughout the season and also in connection with the Junior Seed Fair in the fall of 1933. Besides the juniors gaining experience in producing high class registered seed, it has also created a greater interest amongst the farmers themselves in the importance of pure seeds. And through the clubs there has been a great deal of good seed distributed throughout the district, and on most of the farms where they have boys taking part in this work they have been able to supply their entire farm from seed that originated through club work.

The Lethbridge District Baby Beef Calf Club was organized in 1923. There were 22 members who showed their calves at the Lethbridge Summer Fair this past year, and as usual made an exceptionally fine showing. The champion calf was fed by James Nicol, of Kipp, and was auctioned off at 24c per lb. All the animals shown had a splendid finish, and the members displayed considerable skill in exhibiting these animals in the ring.

In the Dairy Club section there is an Ayrshire and a Holstein Club. These clubs have been in operation since 1927, and it is estimated that through these clubs there has been approximately 300 fine dairy animals placed throughout the Lethbridge district. Their calves this year were well cared for, in a good strong, thrifty condition, and would be a credit to the dairy section at any of the larger fairs. There was a total of 115 animals exhibited at the Lethbridge Fair through the Boys' and Girls' Calf Clubs.

Sugar beet growing is no doubt one of the most important crops that can be raised under irrigation. A 15-ton club was inaugurated in 1927. The purpose and aim of this competition is to serve as an impetus to a better culture of beets and with the end in view of obtaining higher per acre tonnage, and an increase in the sugar content of the beets. There were 46 entries in the last competition, and growers were from the following districts: Taber-Barnwell, Lethbridge-Coaldale, Raymond-Magrath, and the Lethbridge Northern.

There were 17 farmers who qualified in growing 15 tons or better per acre, and top yield was 19.68 tons per acre, grown by Frank Studenka, of Barnwell. During the seven seasons that this work has been in operation there have been 88 growers who qualified in growing 15 tons or better per acre. There is no doubt that these clubs have served a good purpose in the beet growing districts

in stimulating better cultural methods resulting in higher tonnage of beets generally.

Throughout the irrigated districts there has been an increase in the feeding and finishing of cattle and lambs. There was over 2,000 head of cattle finished in the Lethbridge district, the greater part of which was shipped to the Old Country and was highly commented on by the British markets.

The following Pig Clubs were sponsored during the past season: Lethbridge, Taber and Iron Springs. The majority of the members were successful in rearing and finishing their pigs up to the proper weight, and I look for a large membership in these clubs in the coming season.

School Fairs have been held throughout the district, and we have given our time in this respect in the matter of judging. I may say that the quality and the number of exhibits was surprisingly good considering the season, and a good deal of interest was displayed in these fairs.

Assistance was also given in connection with the Horticultural Society in judging garden plots, and also in judging school fair plots throughout the district.

I have served on the Park Lake Board Committee and spent considerable time in this connection. With the co-operation of voluntary help from the farmers throughout the Park Lake area there have been approximately 15,000 trees planted in the last three years. It is now developing into a beauty spot and is a playground serving a large community. At the annual picnic there has been between 4,000 and 5,000 people in attendance, and nearly every Sunday there are large crowds in the community taking advantage of this park.

Office correspondence and inquiries in connection with agricultural problems throughout the district have been very heavy during the past season, and I wish, in closing, to say that we have enjoyed loyal support from the various organizations, both in city and country, in connection with carrying out the duties of this office.

HANNA DISTRICT

(E. G. Wood)

According to statements made by many early settlers, the 1933 crop season proved one of the most disastrous in the history of the district. With a fair amount of surface moisture all crops got away to a very fair start in the early part of the growing season. Very little soil drifting was experienced this past spring, and farmers generally were satisfied with weather conditions and the prospects of a fair crop.

Their early hopes soon gave way to that of despair when scorching winds accompanied by a period of dry weather gradually burnt up the grain crops as well as grass on the range, leaving little for stock to feed upon, and at the same time reducing the possible chance of obtaining sufficient winter feed for stock.

Apart from the extremely dry weather which continued throughout the growing season, the district was also visited by swarms of grasshoppers, which attacked all forms of vegetation and did a tremendous amount of damage. With these two destructive agencies both working together, farmers found themselves at harvest time without a crop to harvest and little or no feed in store to carry their stock through the coming winter months.

Owing to the low price of commercial wheat and also the growing tendency for soil drifting in many parts of the district, considerable interest was taken in the seeding down of crop land to permanent grasses. A large number of farmers took advantage of the Forage Seed Distribution Policy and applied for various quantities of brome grass, western rye grass, sweet clover and crested wheat grass. Previous to the time of seeding, farmers were visited and assistance rendered where possible in discussing with them the most approved methods of soil preparation and seeding.

It is doubtful if much success will be attained from the 1933 seeding as it would appear from the late fall inspections that the dry weather did a considerable amount of damage, as there was little evidence of growth. A large amount of local grown brome grass and crested wheat grass seed was handled through this office. All seed handled in this manner was covered by control sample certificates and cash sales obtained, thus helping out the grower as well as the purchaser.

The Provincial Seed Exchange Policy received substantial support, and several carloads of high quality wheat and oats were distributed at eight different points. This seed, being produced from registered and field inspected crops, should have been the means of materially raising the standard of commercial grain grown in the district; but unfortunately, owing to adverse conditions, the results obtained were very discouraging.

As secretary of the Eastern Alberta Wool Growers' Association, considerable time was devoted to the handling of supplies for sheepmen, as well as the assembling and shipping of carloads of wool. During the past season, 108,678 pounds of wool were handled by this association; and the growers received an average of 13½ cents per pound for their wool. Owing to the fact that private buyers entered the district and managed to persuade many growers to sell outright, the volume of wool handled through this association was naturally reduced. In the final returns the growers who made use of their local wool handling organizations received on an average six cents per pound more for their product than the highest price paid by private concerns.

From the middle of June to the present time the work has been confined largely to relief of different forms. A grasshopper campaign was started and bait mixing stations were operated at nine different points. According to final reports on the operating of these stations, 794,861 pounds of mixed bait were distributed to over 1,000 farmers, and the estimated acreage receiving treatment was 218,000. The output of mixed bait would have been greater had the crops in many districts been worth the saving. Farmers were advised to continue the applications of bait as a preventive measure against a similar outbreak the following season.

The past season was also responsible for many families, situated in the dry areas, moving to other parts of the Province where conditions appeared somewhat more attractive. Considerably more than 100 applications were handled through this office. Assistance was given in the way of finding available farms in the better parts of the Province, giving information on homestead lands, and also particulars in connection with the free movement of settlers' effects.

Owing to an acute shortage of feed for stock many farmers took advantage of the assistance offered in the way of free freight, and moved their stock to parts where feed was more plentiful. Considerable assistance was given in the way of locating suitable places for wintering stock and also obtaining buyers from outside points, thus relieving the situation to some extent.

Considerable time was also given to the distribution of several car-loads of vegetables shipped into the district from other parts of the Province. These vegetables were greatly appreciated, and were eagerly sought after due to the shortage of garden produce which existed throughout this area.

Since the month of October practically full time has been devoted to the handling of feed and the taking of applications for loans under the Fodder Loan Policy. Sixteen different points on the railway are being taken care of through this office, and over 800 applications for loans have been received. Feed shipments commenced the latter part of October, and to date a very large number of car-loads have been handled—some points having received between 60 and 65 car-loads consisting of oats, barley, hay, and green-feed.

SEDGEWICK DISTRICT

(H. W. SCOTT)

In this district the crop year of 1933 opened with bright prospects, winter snow and early rains were sufficient to make germination uniform and growth rapid. Pastures were good and hay crops made a nice start. Midsummer heat and drouth reduced yields appreciably, the oats and barley and later seeded wheat were a light crop, but wheat having been seeded earlier was more advanced before the dry weather set in and gave an average yield of about 17 bushels. The reduction in yield of coarse grains has limited the number of market cattle that are being finished this winter, and has restricted the number of brood sows retained for late fall and early spring litters. The general market price level of wheat, hogs and wool has advanced a little, but the price of all farm products must climb upwards before there will be any marked improvement in the purchasing power of the farmers. The immediate need for more fodder is quite evident, as the number of live stock kept on farms is increasing faster than the relative fodder acreage. In the late winter and early spring considerable time was spent in putting farmers in touch with the Forage Crop Improvement Policy, and as a result a good many hundred acres were seeded by farmers for the first time to brome, western rye

grass, alfalfa and sweet clover. The early season was favourable for these crops, and uniform stands were general, but it is impossible until next spring to determine the amount of damage done to these crops by the dry midsummer. The success of the Junior Alfalfa Club members in the past years contributed largely to the increase of interest in forage crops, and made this general extension of interest possible. The activities of 15 grain and alfalfa clubs were supervised throughout the season. These clubs have stimulated interest in good seed, clean crops, and have provided a useful hobby for a good many junior farmers. The Sedgewick Seed Growers' Association had another interesting year. Good seed was purchased, multiplied and sold, and the meetings and demonstrations were well attended. The directing of another general agricultural field day at the farm of Mr. Chas. Ball was interesting work. The programme for the day was comprehensive, and the large attending public appreciated that kind of agricultural education.

The quality of the market lambs in this district is being recognized by the packing houses, and the premium the farmers receive is noteworthy. For some years the Dominion Live Stock Branch has supplied good rams for Junior club work. Through the assistance of the Federal Government Ram Purchase Policy 25 rams were purchased by farmers in 1931, and again this year 20 more rams were purchased by farmers through the same policy. The judgment of the Live Stock Branch officials in selecting these rams is appreciated by the farmers. We expect the quality and uniformity of the market lambs will still further attract buyers and increase the premium. As all the rams purchased were of the same grade and are owned outright by the farmer, he feels safe in continuing to exchange rams with his neighbours year after year so long as the breeding record of the ram is satisfactory. As far as possible the Sow Exchange Policy has been taken advantage of, but good boars must be available throughout the whole district before the full benefit of the Sow Exchange Policy can be obtained.

Considerable attention has been given to horse breeding this year, and five stallions have been clubbed in the district. In addition, arrangements were completed to have two light stallions stand for service in the district. One, under the auspices of the Edmonton Heavy Hunter Association, stood at Sedgewick, and the other stallion, "Little Arab" from the E.P. Ranch, stood in the semi-ranch area south of Cadogan. All have had a fairly satisfactory breeding season.

The encouragement to calf feeding for the Calgary and Edmonton spring shows was continued, and in addition supervision was given other Junior farmers who secured calves and yearlings from the ranch of Sidey Bros., of Cadogan. This was high class stock to begin with, and the boys made a very satisfactory job of finishing these cattle. Owing to shortage of roughage and coarse grains it was not thought advisable to extend this work this year, but these boys and others are endeavouring to finish in a proper manner what surplus stock they have at home. The bulls put out under the Sire Purchase Policy are doing well, and are leaving a good type of thrifty calves. In turkeys, the showyard winnings of Mrs.

Franch Houcher and Miss Elsie Richards are outstanding, and many birds of their breeding are in farm flocks throughout the district. The Accredited Flocks Associations in the district are in a healthy condition, the general level of breeding in the flocks is improving, and poultry are bringing in much needed revenue on a larger number of farms each year. At Daysland an officer of the association delivers eggs and poultry directly to the retail stores once or twice a week. At Sedgewick the secretary of the association grades and markets the eggs for the members. This season at the request of quite a number of farmers outside the association, the secretary undertook to grade and market eggs generally. The outstanding factor in this connection was the marked improvement soon noted in the quality of the eggs delivered, as the producer saw his eggs actually climb in grade week after week as he improved his methods of feeding and caring for such a perishable product. The local co-operative creamery closed another successful year, having made over the half-million pounds of butter, and again paid a bonus of two cents a pound on all butterfat delivered. Nine out of the 10 regular school fair associations conducted their regular activities this year, holding school fairs, public speaking contests, one-act play contests and sport days. Good interest was shown throughout, and we believe the school fair to be the foundation on which a large part of the educational work in the district is built.

Since early October my time has been spent almost entirely in the dried out area, assisting in getting in potatoes and vegetables for the people, moving out settlers and live stock and in getting in feed for the stock remaining. In this area crop prospects were excellent, but hot dry winds during midsummer and hoards of grasshoppers left the settlers with practically nothing for man or beast. In seasons of sufficient rainfall this area produces big crops of wheat, but a part of the land is not suitable for cultivation. The experience of good farmers in the district for a period of 20 years or more, the knowledge gained by the Provincial Department of Agriculture with their demonstration farms at Medicine Hat and Youngstown, and the Federal Government with its farm at Manyberries, should be a guide in attempting to solve permanently the problems of a considerable portion of this area.

VEGREVILLE DISTRICT

(F. H. NEWCOMBE)

The heavy snowfall of late winter and early spring provided a liberal moisture supply, and as the land was quite dry the preceding fall and was not frozen greatly, the absorption was good and the run-off was slight. Spring opened quite late and seeding did not get under way until about April 28th. The month of May was wet and cold, and further delayed seeding, so that more farmers than usual resorted to stubbling in and there was greater use of the one-way plow and the tiller combine. June was quite dry, only 1.5 inches of rainfall being recorded, as a result of which short heads were in the shot blade by the end of the month. During

July four inches of rain fell, but the weather for the most part was unusually hot and late crops suffered accordingly. The hay crop was just fair. In September and October rain and snow delayed threshing, though most of the crop was harvested in fair condition, and in only a few cases was there severe loss of grade. Most of the crop graded 1 and 2 Northern, with a little 3 Northern. The average yield was: wheat 16 bushels, oats 35 bushels, and barley 23 bushels per acre. There was decidedly heavier dockage than usual in this year's crop due perhaps to the dry weather in mid-summer.

Interest in live stock generally has been fairly keen despite prevailing prices. There has been some revival of interest in horse breeding, and we have endeavoured to assist in placing good stallions of draft breeds in the district. We were successful in arranging for the Clydesdale stallion Glenboig Footprint to be travelled in this district during the season, and he was mated with 100 mares. While not an outstanding show stallion, he has sired some good colts, and it is hoped that we may see an even better horse placed for the coming season. It is probable that the Percheron breeders who were too late in organizing last year will do something for the coming season.

Several bulls have been placed under the Provincial Assistance Policy, and we have been able to give some assistance in taking applications and locating animals. There are four Federal loaned bulls in this district, one having been added during the year. These are located among the Ukrainian people and are doing good work. If this policy could be extended it would undoubtedly provide the most rapid method of cattle improvement.

We have also given some assistance to farmers to acquire pure-bred cattle by private purchase, and some 20 females and 15 bulls have been introduced in this way. Following the rather low returns of cattle finishing operations last year, there was not very keen interest in this phase of live stock work this fall. One or two who have their own calves are feeding them out, and present price trends seem to indicate a reasonable profit this year. The surplus of feed was not great, and the early closing of winter pointed to its being needed, and this in some cases induced the farmers to sell their cattle on a quite low market.

Swine raising has always been an important feature of agriculture in this district, and it has taken on a new lease of life with the steady improvement in hog prices throughout the year. Last year's low prices at breeding time discouraged the mating of sows, and reports from caretakers of loan boars indicated that breedings were off from 25 to 50%. Mortality among young pigs was quite high last spring, and it is doubtful if more than 60% to 70% of the pigs farrowed were living at weaning time. There was some hairlessness also and some losses of normal pigs at farrowing time due to unsatisfactory weather and farrowing quarters. Sow breedings this fall will undoubtedly show a substantial increase over last year, and interest in procuring better breeding stock has been quite keen. In this regard the sow exchange policy was well patronized in this district, stops being made with the train at

Vegreville and Tofield. Bacon demonstrations also were held at these points, and in each case were well attended by interested farmers. One result of these was to discourage the production of Tamworth pigs on account of the seedy bellies. A large number of breeding animals, mostly pure-bred Yorkshire, were located or exchanged through the medium of this office. The Boar Bonus Policy was not well patronized this year, but there will be more interest in this when it becomes better known.

Sheep have not increased greatly in numbers during the year. Lack of capital for fencing together with the relative return for the product are factors which inhibit the growth of the industry here, and it is doubtful whether sheep will assume a very important place for some time to come. Information has been given and demonstrations made in castration and docking, care, management, etc.

The winter of 1932-33 was quite hard on cultivated hay crops, and many of the fields seeded in 1932 were winter killed. This was particularly true of alfalfa and sweet clover, and was probably caused by their going into the winter with a short top and very dry. Brome and western rye stood up fairly well. There was good patronage of the Dominion Government seed distribution policy, and a continuation of this policy will certainly result in increased seeding of cultivated hay and a better understanding of how to handle it. We assisted the Field Crops Branch by making some 120 inspections of plots. Assistance was given to farmers contemplating sending exhibits to Regina Grain Fair, and some creditable exhibits went forward from this district.

The portable cleaner continues to work in the district, and is doing much to improve the quality of seed grain as well as being used on commercial grain to raise the grade and reduce the dockage. This fall it has been in steady use when weather would permit. Some 40,000 bushels have been put through, and the machine is now about paid for.

Junior clubs are essentially a large part of our work, and these provide a valuable contact with the young people as well as with their parents. Grain clubs were organized in this district this season as follows:

Club.	Grain.	Membership.
Tofield	Reward wheat	25
Tofield	Victory oats	14
Ryley	Marquis wheat	19
Holden	Marquis wheat	16
Bruce	Marquis wheat	27
Bruce	Victory oats	13
Viking	Marquis wheat	20
Vegreville	Marquis wheat	10
Vegreville	Victory oats	10
Total membership.....		155

Early in the spring an attempt was made to organize local advisory committees in the hope that they would stimulate interest in the junior work as well as any other activities that might be tried in the districts. While some assistance was received, there was still much to be desired, and it is very difficult to find local farmers or others who can or will give this kind of work much attention. If it were possible to pay travelling expenses of these

men to drive around and visit the club members some good could be accomplished, and the District Agriculturist could extend his influence over a wider territory by delegating much of the supervision to these committees. Interest of the junior members lags when supervisory visits are few. Field days and achievement days were held for each of the grain clubs. The continued introduction of good seed through the medium of the junior clubs is doubtless having its effect on the quality of grain produced.

The scarcity of young pigs precluded the organization of a new swine club at Bruce. Applications were received, but we could not locate pigs at prices which we felt the boys would be justified in paying, and no club was organized at that point. The clubs at Vegreville and Viking also were dropped for the time being, but an effort will be made to revive them next season. The clubs at Tofield and Ryley were carried on with satisfactory results, and the usual supervision was given to them. A shortage of feed made difficult the uniform development of the young pigs, and at marketing time many had already gone to market while others were not yet up to weight. Thirty-five Yorkshire sows were distributed to members and prospective members at these points. Tofield and Ryley Clubs combined for shipment of a carlot, which was sold to Weiller & Williams at \$4.50 for bacons f.o.b. The load went to Montreal. The surplus of 18 head were trucked to Gainer's at \$4.60 for bacons, f.o.b. Edmonton. The usual training was given to the members, and two teams competed at the central competition.

A total of some 30 boars, some of them very excellent, are at present on loan to these swine clubs under the Federal policy.

The Tofield Calf Club, organized in the fall of 1932, was carried to completion this year. Supervisory visits were made to the members as often as convenient. The Club Fair held on June 16th brought out 24 calves, which were exhibited in pairs. After the judging the calves were sold by auction to five Edmonton firms who attended. The average weight was 770 lbs., and the average selling price was \$4.45 f.o.b. Tofield. Tops brought \$5.00. The calves were not weighed into the feed lot, but it is estimated that the average gain was 300 lbs. A team of boys was trained which was successful in winning the Provincial competition at Edmonton, and represented the Province at Toronto, where they stood in second place. The club was not reorganized this fall owing to a combination of circumstances.

Some work has been done for the Relief Division. Two weeks in September were spent in locating feed and places for wintering stock for the drouth area. In addition, some time was spent in connection with the purchase of horses and outfitting settlers under the Relief Settlement plan.

A field day was held at the farm of John Gordon, of Innisfree. The meeting was well attended, and general approval of the day was expressed by the farmers. This feature will probably be continued next year.

We are pleased to report continued co-operation from the farmers in the district which we serve. Statistics shows that 1,375 persons were visited during the year.

From November 17th until the end of the year was spent with the Poultry Branch in inspection of Approved Flocks and blood testing.

FRENCH DISTRICT AGRICULTURIST

(J. H. TREMBLAY)

Although the spring of 1933 has opened good and early, there has been a considerable delay in seeding due to the excess of rain in several locations. The first seeding which has come to our attention was made in the Edmonton district on April 16th, but it was not until April 20th to 25th that seeding was general. In the St. Paul district seeding was also general at the same time, but in the Grouard district it was a few days later.

The average yield in the Edmonton district, according to our estimates, was approximately 27 bushels of wheat to the acre, the oat yield being between 35 and 40 bushels to the acre, while in the Grouard and St. Paul districts the wheat yield was 18 and 20 bushels respectively to the acre.

The extension, in forage crops policy, has been considerable during the last year. This has been made possible by the distribution of seed made by the Dominion Seed Branch, in co-operation with the Provincial Field Crops Branch, under which agreement the farmers could secure seed for one-half the ordinary price and have two years' time to pay for same. Under this policy we have distributed in our districts 25,413 pounds of the various fodder crop seeds, and this amount has been distributed amongst 144 farmers who, in most cases, were at their start in the growing of these crops.

Our little demonstration field at Girouxville has grown satisfactory crops during 1933, and this for the third year in succession. It may be worthy of saying that this little demonstration field has revealed to the farmers of that district that practically all forage crops could be grown there.

The progress made in the live stock industry during the year was very noticeable. A great number of farmers have paid more attention to the breeding of better stock particularly by the use of pure-bred sires.

In the cattle division the farmers are showing much interest in the Provincial Loan Policy for the purchase of pure-bred bulls, and a great number of them have taken advantage of this in securing a pure-bred bull. We have been instrumental in securing 12 Shorthorn bulls for the Edmonton district and two Red Poll bulls for the Grouard district. In addition, five pure-bred Shorthorn females have also been entered in the Edmonton district.

A great deal of work has been started to improve the quality of the hogs in these districts. It has been our privilege to introduce 30 pure-bred boars and 65 pure-bred gilts, all of the Yorkshire breed. This work will be encouraged as much as possible in the next year, and it is hoped that it will bring about a noticeable improvement in the general quality of our market hog.

Due to the fact that we have been away from this office just at the time when the extension work in poultry could be done, it has not been possible for us to do any of it during the last fall. However, we have been able to start several new flocks with bred-to-day Barred Plymouth Rocks in the spring, which will develop to be a source of supply in the various sections. It has also been possible for us to purchase about 25 pure-bred cockerels for the use of farmers in our district.

During the year 1933 we have had under our supervision five grain clubs, located as follows: Falher, 2; Donnelly, 2; and Girouxville 1, comprising 70 members; also an Alfalfa Club at Legal, with a membership of 14.

We also had supervision of six live stock clubs, divided as follows: three swine and three calf clubs. The three swine clubs were located at Vimy, High Prairie and Donnelly, while the three calf clubs were located at Morinville, Legal and Falher. The total membership in the live stock clubs is 114. The oldest club in operation was the Legal Calf Club, which turned out at its local fair with a class of two-year-old heifers, a class of yearling heifers and a class of calves, all of which made a very creditable showing.

As special reward, we had a pure-bred Red Poll heifer as a first prize for the winner in the calf class of the Red Poll Club at Falher. This prize has been made possible by a contribution of \$15.00 made by the Red Poll Breeders' Association for the encouragement of this breed. This calf was won by Yvette Viens, of Falher, the second prize winner. The first prize winner being Madeleine Lauzon, who gained this place with the pure-bred heifer calf she had won the year before, and thus was not eligible for the special prize. As was stated in a previous report, we are endeavouring to create centres of certain breeds of cattle, and it is with this in view that a Red Poll Calf Club has been organized in that district.

We have also received, for the winner of the calf clubs at Legal and Morinville, a pure-bred Shorthorn heifer from the Shorthorn Breeders' Association. This calf has been won by Blanche St. Martin of Legal.

This encouragement received from the cattle breeders' associations is proving to be very helpful in this club work, and it is to be hoped that similar encouragement will be offered in future.

WILLINGDON DISTRICT

(WILLIAM N. PIDRUCHNEY)

As in most northern sections of the Province, spring opened up much later than usual, and seeding was not general until about the 18th of May, along the Lloydminster-Willingdon line. With an abundance of rainfall from the previous fall it was found difficult to get an early start on the rolling land, and consequently a greater delay was experienced than usual in waiting for the pot-holes to dry up. The weather, however, was very favourable, once the

spring work commenced, and seeding was completed in record time. Germination was even, and uniform growth resulted in the early sown crops, but the coarse grains which were sown towards the end of the season suffered slightly from lack of moisture, which resulted in uneven germination.

This handicap was overcome considerably later on in the growing season when the much needed rains arrived, and continued throughout the growing season at proper intervals. The growth was rank and heavy yields were expected, but the weather conditions during the ripening stage were not favourable enough for a good filling of the grain, and yields were lower than anticipated.

Fall frosts arrived too early for some grains, which reduced the grades somewhat of the later sown crops. The coarse grains suffered the most, but enough of them escaped the frost to ensure a plentiful supply of seed for the following year.

Threshing operations commenced early, but were seriously interrupted for about a month by intermittent rains. Some grains were threshed tough, but when the weather cleared up the rest of it was graded dry. The early snowfall, however, caught some grains in stook, and although some of it was threshed from under the snow, the balance remained in stook during the winter.

Although the prices for live stock were discouraging throughout the year, the quality, however, was being sought for more than ever. The inferior type of the sire is being gradually disposed of and replaced by sires of better quality of some of the recognized breeds. Eleven pure-bred Shorthorn bulls were purchased at the Edmonton bull sale under the Sire Purchase Policy. Thirteen Shorthorn and three Aberdeen-Angus bulls were located for the farmers privately, making a total of 27 bulls purchased during the year, indicating the recognition of the pure-bred sire for an average herd.

The interest in horse breeding during the last year was even greater than in other classes of live stock. During the period of high prices for cereal grains horse breeding was sadly neglected. The time arrived, however, during the last few years when a great many tractors had to be abandoned, and horse power had to be resorted to. This change found many farmers with nothing but old horses on hand, and unless something was done about breeding more mares the farm power situation would become very serious. This fact was realized by a great many farmers, and consequently a revival of horse breeding took place. This office was called upon to offer assistance in this connection, and during the spring of 1933 seven Percheron stallions were placed for service under various policies. All of these stallions were patronized to their maximum during the breeding season, and it is expected that their presence in the respective districts will make a substantial contribution towards the improvement of horses in years to come. There are several other communities which will require similar attention in the near future, as several requests for stallions have come to this office already.

As might be expected, hog production has declined somewhat, but the quality is maintained more than ever. Greater demand for

sows and boars of good bacon type is being noticed, and assistance was being rendered in very many cases throughout the year in locating these. Where several years ago only certain individuals throughout the district recognized seriously the quality as of prime importance, we now find that it is getting the attention of every farmer. It is a matter of past history to come across a farmer now who is willing to have his sows bred to an ordinary boar. This is a very encouraging feature, as this district will always remain as one of the leading districts in so far as the volume of hogs marketed is concerned. If this is coupled with the quality it would make a wonderful combination. The Federal Boar Loaning Policy is responsible to a very large extent for the progress that was made through the outstanding boars which have been placed with the swine clubs for the past several years, of which there are 41 of them at present. In addition to these, there are some others in service, most of which were located through this office.

The Sow Exchange Policy has been taken advantage of by about 30 farmers, and had the policy been announced earlier in the year a great many more farmers would have availed themselves of this opportunity. It is hoped that this policy will be continued for the coming season, as I consider it one of the major methods through which improvement may be secured the fastest in many districts.

The crop improvement work is receiving continuous attention. The growing of pure cereal grains is being advocated at all times. The Junior grain clubs are being encouraged, which are very well adapted for the production of pure seed, and in this manner supply the districts with seed of high quality. The seriousness of the weed situation is brought to the attention of all concerned, and it may be stated that a fight against this menace is stronger than ever. This is indicated by the number of requests that come during the year for the information about the weeds.

The Federal Forage Crop Policy has been taken advantage of by about 40 farmers, which established every one of them with a much needed plot of hay or pasture, and in addition has assisted in proving the value of cultivated grasses beyond any doubt to many other farmers.

The Junior alfalfa clubs have met with wonderful success, and the acreage of this fodder is on the increase every year. Several members have permitted their plots to go to seed, and have harvested good yields from them. If similar success is achieved in future years it is expected that sufficient seed will be raised to meet the local demands. These clubs have proved more than anything else the adaptability of alfalfa for this territory.

Junior club activities still remain one of the major activities of this office. Various programmes can be put into effect, and prejudices broken down through the Junior clubs in many localities where very often no other methods can be used successfully.

Three swine clubs were in operation during the year. The Willingdon and Andrew clubs continued as in the past, and a new one at Radway was organized with a membership of 24. Many of the old members are well established in good bacon type pigs, and it is a common occurrence to find a member whose market hogs

have graded nothing else but bacon and select. In addition, the old members are a valuable source for good breeding stock.

The Willingdon Pure-bred Shorthorn Heifer Club has completed another very successful year. The twelve heifers in the club have done exceptionally well, and when exhibited last fall at a local school fair made a wonderful impression on all who saw them.

Another similar club was organized in the Hairy Hill district last spring with 13 members. Some outstanding heifers were located for the members, and it is hoped that in the next few years the two clubs will be a valuable source of supply of pure-bred bulls for the local demand, which is on the increase every year. All of the members are taking a very keen interest in the project, and personal supervision is given at frequent intervals.

Since the government has curtailed some of its assistance to the school fair work it was found difficult to do very much along that line this year. The Willingdon district has gone ahead, however, and held a very successful fair. The outstanding feature of the fair this year was the live stock end of it. Fourteen colts were lined up before the judge, and the first seven or eight were a real credit to their owners. They were all sired by Barnett, the University stallion, which was clubbed in this district the previous year. About 27 calves were exhibited which were also a great improvement in quality over the calves shown at the previous fairs. The sheep and poultry classes were patronized to a greater extent than in the past, but not very much improvement could be noticed over the former years in quality.

Seven Junior grain clubs were organized and supervised from this office. This phase of the Junior activities leaves several thousand bushels of pure seed in the district every year, and beyond any doubt is one of the most effective agencies in eliminating the seed of inferior varieties and of varieties which have degenerated. Local seed fairs were held in each case, which are of great value not only to the members, but to the general public. The members of the Willingdon Barley Club won the first seven places at the Provincial Seed Fair held in Edmonton last winter.

Considerable time is devoted to all of the Junior clubs by way of instruction in judging, meetings, field days, etc. Meetings of members are held at frequent intervals at which the various phases of club work are being discussed. Instructions in judging are being given regularly in preparing the members for the various competitions which are a part of the club work. Members as a rule take a very keen interest in this phase of the work, and teams from these clubs make a very creditable showing every year at all Provincial competitions.

Other activities to which assistance had to be rendered throughout the year were: pig survey, 37 public meetings, judging at seven various fairs, bacon hog demonstrations, and a large amount of correspondence was attended to.

During the last six weeks of the year assistance was rendered in the dried out portions of the Province in the south in administering the Feed Relief Policy.

MYRNAM DISTRICT

(A. J. CHARNETSKI)

The spring of 1933 opened up late and cold. Field work was not general until the end of the first week in May. A heavy snowstorm on May 15th further delayed all field work, consequently seeding was finished later than usual. There was a heavy rain which finally terminated in hail on June 17th. Considerable damage was done to early grain and to gardens throughout this valley.

The area seeded to wheat was slightly decreased and, naturally, that of the coarse grains was increased, with barley receiving quite a favourable consideration. The summer was rather dry and grain on higher land suffered severely; on the whole, yields were reduced by 8 to 12 bushels per acre.

Harvesting operations began somewhat earlier than usual, but it was unfortunate that the grain did not ripen as evenly as it did in 1932; consequently, some was touched by frost and some was cut prematurely, resulting in the general lowering of the quality of wheat. Considerable rain fell just as the farmers were starting to thresh. Some threshers resumed their activities before the stooks were sufficiently dry, with the result that a comparatively large percentage of grain was graded as tough.

Two carloads of certified Marquis wheat was shipped into the district under the Provincial Seed Exchange Policy. Farmers were very well pleased with the quality of seed wheat in question. It is very much regretted that due to scarcity of supply, we could not get at least two more cars of such a high quality of seed wheat. Undoubtedly, this introduction of wheat will have a very desirable effect on the quality of commercial wheat in this district.

Junior grain clubs again proved to be very popular with the junior farmers. There were six grain clubs organized and supervised from this office, consisting of Marquis wheat clubs at Myrnam, North Slawa and at Derwent; Victory oat clubs at Myrnam and at Derwent; and an O.A.C. 21 barley club at North Slawa. Membership of the clubs in question was 135 (including some duplicates). A number of lectures were given to members during the season. A very successful Junior Grain Club Field Day was held at Myrnam in August. Mr. Halman, the field supervisor, gave a very interesting and instructive lecture and a demonstration on the production of field crops, also on the selection and identification of the different varieties of wheat, oats and barley. This meeting was very well attended. The seed fair in each of the clubs mentioned was held in December. Mr. E. H. Buckingham, Assistant Field Crops Commissioner, judged the exhibits and conducted very instructive judging contests. These seed fairs were well attended, both by young and old. It was most pleasing to note that all of the exhibits were of a very high quality and a real credit to the young exhibitors.

Grass crops are rapidly gaining in popularity among the stockmen. There were over forty farmers which took advantage of the Dominion Forage Crops Policy, and at least as many more were turned down because of the shortage of good seed. After three

years' trial it is now proven beyond any doubt that such legumes as alfalfa and most of the clovers do well in this district; considerable information is being consistently disseminated from this office regarding the best methods of production and harvesting of legumes. It is hoped that the forage crops policy in question will be continued in the future.

Owing to abnormally low prices of hogs during the early part of 1933 many farmers lost all interest in this class of live stock, consequently only a small percentage of sows were bred for fall farrowing. However, since we were placed on a bacon quota basis with the Old Country, and the price took a sudden upward trend late this fall, there is evidence of a revived interest, and many farmers are purchasing new breeding stock from our swine club members. Swine clubs are proving to be an excellent source for supplying of high quality breeding stock throughout this district. This can readily be seen by the fact that within three years the percentage of bacons and selects have been raised to over 50% of all hogs marketed at points where swine clubs are in existence.

There were three Junior swine clubs supervised from this office, namely, at Myrnam, North Slawa and Derwent, with a total of 55 members. Members were very much interested in all club activities, and there was a very good turn out at every club meeting. Swine club fairs were held late in the season, and it was a pleasure to note that the quality of pigs exhibited at all of these fairs was above that of previous years. There were two teams (Myrnam and Derwent) sent to Edmonton to participate in the Inter-provincial Judging Contest. The plans are to organize two more swine clubs this coming year, as their value in being instrumental in the improvement of pigs in any community is only too evident.

As usual, the Dominion Live Stock Branch has again co-operated with the swine clubs by placing eight new Yorkshire boars for their use. This is very much appreciated by club members, as the boars are of a very high quality.

Information regarding care and handling of brood sows has greatly reduced losses at farrowing time, which, in most cases, were due to mineral deficiency.

Despite the low price of cattle and beef products there is a continual effort on the part of farmers to gradually improve the quality of their herds. The attempt is to produce a type of animal which would be good for both beef and milking purposes, therefore Shorthorns are being concentrated upon. There were two Shorthorn cows purchased at the Vermilion School of Agriculture, one of them with a bull calf at foot and another in calf to their Junior and reserve grand champion bull, Dominator. A total of 15 pure-bred bulls were brought into this district, comprising one Aberdeen Angus and 14 Shorthorns; of these, eight were purchased under the Provincial Sire Purchase Policy, six were bought under the Federal Bull Loaning Policy, and one purchased privately.

A Shorthorn Calf Club was organized last spring, consisting of 26 members. Only heifer calves sired by pure-bred Shorthorn bulls were allowed to be entered. The Calf Club Fair was held on September 21st. Mr. J. F. Andrew judged the calves, and also

gave a very instructive lecture to club members participating in the local judging contest. The club sent two boys to take part in the Inter-provincial Judging Contest.

Owing to extremely low prices of beef, and the disappointing results of last year, it was decided not to reorganize the Baby Beef Club this fall.

There is an increasing interest in the breeding of a better quality of draught horses. Percheron is the breed favoured by the majority of farmers. Last spring four Percheron stallions were purchased for this district, as it was found that the matter of stallions coming into the district for a period of three months, in many cases, proved to be unsatisfactory. Of the four stallions which were purchased this year, two were bought co-operatively and two by private parties, so that two of them travelled in a syndicate, two were clubbed under the Federal assistance to horse breeders, and one stood privately, as there was one stallion purchased last year.

With the kind assistance of the Provincial Poultry Branch, poultry meetings and killing demonstrations were held this fall at Miroslawna, Pathfinder, Krasnohora, and at Northern Valley. The interest appeared to be very keen and attendances exceptionally good. There are a number of good turkey flocks in this locality, and with the introduction of a few good Toms undoubtedly will give them a superior type of market bird. The quality of chickens is gradually improving, as a number of farmers use pure-bred males and others buy setting eggs practically every year. It is hoped that within the next two years these 3-lb. hens will be a thing of the past.

Considerable attention was given to eradication and control methods of noxious weeds. The weed problem is continually becoming more acute. The increase of wild oats, sow thistle, etc., have made it necessary for many farmers to adopt more scientific methods in order to cope with this perpetual weed problem. The increased use of modern machinery is proving to be of great value in the control of weeds.

Two school fairs were organized last spring, but owing to the fact that there was no grant given for this year, further work in this connection could not be carried out.

Assistance was rendered with the Sow Exchange Policy at Andrew and Willingdon.

It was necessary to make a number of inspections for the Field Crops Branch in connection with the Forage Crops Policy and hay for relief purposes.

GRANDE PRAIRIE DISTRICT

(W. J. THOMSON)

The farmers of the Peace River are facing the New Year with more courage and optimism than has been the case during the past three years. There has been considerable improvement in the prices

of grain, cattle and hogs. The past year will be remembered as the year when bacon hogs sold for as little as \$1.50 per hundred at point of shipment in the Peace River, and a fall when anything but good steers would not bring more than freight.

The farmer's major problems have been problems of marketing and not of production. The problems of marketing, he believes, can be solved only by those in higher positions, and he is looking to them to exercise more control in the marketing and processing of his products.

While the past year may have been a difficult one, it has been a most successful one for this office. We have been receiving more enquiries during the past three months than at any time during the past three years. Farmers who have followed the suggestions of the Department and have maintained their breeding stock and are continuing to raise better type bacon hogs, fatten their beef steers or are continuing to grow seed oats and forage crops, now have the assurance of handsome profits for their labour and courage.

The crop harvested in the Peace River during the past year was smaller than average and the grades the lowest in a number of years. The spring was late, following a long cold winter, with heavy snow. Seeding did not commence until the second week in May. This was followed by a cool summer, with little hot weather except for the first part of August. This resulted in a late crop, which was touched with frost late in August and again in early September, followed by snow when only a part of the grain was threshed. In the Spirit River, Valhalla and some districts north of the Peace River, considerable grain is still in stook, and some not worth threshing.

More than one-third of the wheat in the Peace River will grade feed, and 80% below No. 2. The greatest loss has been in the seed oat crop. The district usually produces more than one million bushels of 2 C.W. oats, most of which are suitable for seed. The 1933 crop is so badly frozen that there will be little more than enough seed to supply the demand. Many farmers will be forced to sow seed that is very low in germination. Hay crops have been light and pasture crops returned only a fair amount of feed, showing a need for more forage crops and a consideration of a more important place in the crop rotation.

This is a district located a considerable distance from markets; its problems are different to those in other parts of the Province. Owing to high freight rates the farmers must take less for what they sell and pay more for everything that they buy, which has developed during the last three years a determination on the part of the farmer to grow more of the things needed for home use. There is more cream, butter, pork and beef being consumed at home, and there is less desire to grow wheat as the major cash crop, with more interest in feeding live stock and in the production of forage crops.

The Peace River has a big problem in its new settlers, many of whom come from the drier parts of the Province. They had little capital when they started homesteading. This was used up before they could cultivate enough land on which to grow feed for their

live stock. These people have not been able to find employment elsewhere to help themselves, and consequently had to obtain relief from the Government. They must continue to ask for help until they can find employment at a profit for part of their time, away from the homestead. Encouragement has been given to these people to grow gardens, and garden seed was distributed to more than two hundred families last spring. It has been necessary to provide seed and feed relief in some districts.

There has been a keen demand for good work horses, and more colts have been raised than for some years. There is an enquiry for club stallions at the present time. Horses have been used almost to the exclusion of tractors for field work, farmers believing it cheaper to feed 15 cent oats than to buy 35 cent gasoline.

Two new swine clubs were organized in the Spirit River district, and club work carried on with organized clubs at Debolt, Sexsmith and Grande Prairie. These clubs have been sponsored by the local boards of trade, and have been a part of the general plan to encourage the marketing of more coarse grains through live stock. The club work has been encouraging. All the members made splendid profits on their pigs, and the breeding stock is now worth twice the original cost. These clubs have been a source of good breeding stock for the whole community, and many sows and boars have been distributed in the immediate and other districts from swine club stock. Bacon type boars have been received from the Dominion Live Stock Branch again this year for loan to these clubs.

Bacon hog meetings and field days have been held in all districts south of the Peace River to familiarize hog growers with the type of bacon hog most suitable for the British Wiltshire trade. These meetings have been attended by Mr. S. G. Carlyle, Live Stock Commissioner, Mr. S. G. Freeborn of the Dominion Live Stock Branch, or some other official who is familiar with market requirements.

Ram clubs have been organized at Fairview and Grande Prairie, with the assistance of the Dominion Live Stock Branch, and 35 Hampshire rams distributed under this policy.

Beef cattle feeding is becoming an important industry. When it was known that crops had been damaged by frost, an effort was made to keep as many cattle as possible off an already depressed market. Considerable work was done by this office in arranging with farmers, who had surplus feed, to take cattle from ranchers and others on a guarantee or share basis. Farmers were also encouraged to feed their own cattle. This has resulted in 800 less cattle going to market in the fall of 1933, compared with the same months in 1932. Many feed lots have been visited regularly, and the results promise a continuation of this method of marketing more of the coarse grains grown here.

Beef calf clubs have interested junior farmers in feeding cattle. One club was organized last year, and another club started in November. Twenty-five boys are feeding calves for the May market. Beef calf clubs and more cattle in feed lots have created more interest in better feeding methods and a demand for forage crops. The demand for forage crops is making improved farm practices

possible, with crop rotations and better cultural methods. During the year this office, with the co-operation of the local Peace River Co-operative Seed Growers, Limited, and the Field Crops Branch, has distributed more than 22,000 pounds of grass and clover seeds. Alfalfa has been distributed to 60 farmers, sweet clover to 35, and rye, brome and timothy seed to more than 50.

The District Agriculturist acts as secretary of the Peace River Co-operative Seed Growers, Limited, of Grande Prairie, and through them it has been possible to make clean seed from grass and grain crops available to farmers of the district at a very low cost. Assistance is also given in selling and shipping grass seed and seed oats and wheat in car lots. Two junior crop competitions have been sponsored by the Seed Growers' Association. These competitions have created considerable interest in the growing of better seed, and better farming.

The district again has the distinction of producing champion grains and grasses. At the recent World's Grain Show and Conference at Regina, Peace River growers won a large share of the total prize money coming to the Province. Four of the Junior Club members won prizes in the wheat and oat classes.

A Field Day and Calf Club Show was held at the farm of Mr. Alex. Craig in June. More than 500 people turned out to see the exhibit of calves fed by the members of the Grande Prairie Beef Calf Club. Mr. S. G. Carlyle, Live Stock Commissioner, and Professor J. P. Sackville judged the calves, and gave demonstrations of type and finish required in beef calves. Classes of draft horses, beef cows and bacon hogs were used to demonstrate quality and breeding types.

The annual Grain, Calf and Swine Club banquet, sponsored by the Grande Prairie Board of Trade, was held on December 1st. This was addressed by Mr. H. A. Craig, Deputy Minister of Agriculture. Meetings were held the following days at Beaverlodge, Wembley and Sexsmith. Mr. Craig gave some very interesting and educational information regarding the marketing of Canadian bacon in the British market.

It is the regret of this office that it has not been possible to do more work north of the Peace River. The general work of the office has been carried on and an effort made to give lectures and do educational work whenever possible. We are pleased to report an increase in the number of enquiries coming to this office, and believe it shows confidence in the policies of the Department of Agriculture.

SCHOOL OF AGRICULTURE, OLDS

(JAS. MURRAY, *Principal*)

The 1932-33 session was brought to a close on the evening of March 30th, 1933.

At the closing exercises diplomas in Home Economics were awarded to 16 young women and diplomas in Practical Agriculture to 32 young men. A number of students who had one or two sub-

jects short of having their Grade XI complete, but who took the two-in-one courses, were awarded certificates showing that they had satisfactorily completed their course of study. The diplomas will be awarded when they have written off their supplementals in Grade XI.

At present this school is the only one of its kind in operation in Alberta, so that we have students enrolled from all parts of the Province as well as a few from British Columbia and Saskatchewan. The enrolment is very satisfactory, those in attendance being well divided among the various classes:

First Year Agriculture	45
Second Year Agriculture	36
Two-in-One Agriculture	10
First Year Home Economics	17
Second Year Home Economics	15
Two-in-One Home Economics	16
Third Year (boys 15, girls 2)	17
Total.....	156

Among the second year students in Agriculture we had seven who had taken their first year at the Vermilion School, and in the second year Home Economics class four girls from the same place.

The courses of study have not been changed to any extent for several years. The time-table is now a very full one, and strict application is necessary for students completely to cover the work assigned. We find each year more and more interest in the two-in-one courses—those designed particularly for students who have their Grades XI and XII. This year we have 10 boys and 18 girls taking these courses. Last year we arranged a number of separate classes for these students instead of grouping them with the first and second year students, and found this a distinct advantage. We have extended it further this year, and consider that the work is thus handled more efficiently.

The members of the grain judging teams who represented Alberta at the World's Grain Exhibition at Regina were given a week's training here in July before leaving for Regina. All three teams gave an excellent account of themselves in strong competition, the intermediates winning second place, the juniors second, and the seniors third. The individual members of the teams won in all over \$2,000. One of our graduates, A. D. McFadden, won over \$500, and another, Herb. Cripps, over \$200.

All of the boys who represented Alberta in the junior class are now registered here as students—one in the first year class and two in the two-in-one class.

Garden seeds were distributed in the spring to the school fair centres in this district and the ones formerly served from Claresholm and Raymond. Shortage of funds made it impossible to visit many of the centres either during the summer or at the time of the fairs in the fall. The result was that while the majority with enthusiastic officers carried on, a number did not attempt to hold fairs.

SHORT COURSES.

The short courses held for those winning scholarships at the school fairs occupied three weeks during the month of July. The first week we had the pupils from the fair centres in the Raymond-

Claresholm districts, the following week those from the Vermilion district, and the third week those from Olds. Between 80 and 90 were present each week, and threw themselves with enthusiasm into the work.

From those attending four were selected who were awarded scholarships of a year's course at this school. The winners were as follows: Blanche Lonsdale, Warner; Eugene Marr, Millet; Margaret Ball, Sedgewick, and Paul Therrien, St. Paul. Two of these are in attendance this year.

During the first week of July we again had the pleasure of entertaining the members of the Women's Institute Girls' Clubs for their annual convention. Between 60 and 70 young women were present from all parts of the Province. About half of the programme for the week was supplied by members of the school staff, so that the girls could become acquainted with the institution and the nature of the course which it offered to young women, and we have several students this year who were delegates to the convention.

The fourth annual Farm Women's Week was held during the latter part of July and early August. Over 60 delegates were present from all parts of the Province. They were all highly pleased with the programme provided for them. This included lectures and demonstrations by the various Domestic Science instructresses and by the lecturer in Horticulture. We could during this week accommodate twice as many as were here, and trust that larger numbers will in future take advantage of the opportunity offered for a profitable holiday.

The first week in August we had a field day to which farmers and their families were invited, to visit the school and to see the grounds, the buildings, the live stock and the field crop experiments. We were favoured with good weather and had an attendance of about 400. After a picnic lunch, for which the school provided tea, coffee and milk, those in attendance were divided into groups to visit the various departments. Many of those in attendance expressed themselves as highly pleased with the day and greatly interested in the work that the school was carrying on.

Many other picnics were held by men's and women's organizations in this part of the Province. Women's institutes, calf clubs, junior grain clubs, U.F.A.'s and other groups, all took advantage of the opportunity that the grounds present to spend a pleasant and profitable day here. During the summer several thousand people visited the school and the farm.

It has been necessary to curtail our experimental work with farm crops, but it has been possible still to carry on some useful and valuable work. Cereal varieties are no longer carried in large numbers. We grow only a few of the more important ones to gather additional data on their behaviour and to serve as demonstrations for those who visit our trial plots.

We are growing only seven varieties of wheat. "Red Bobs No. 222" continues to lead the list in yield, and can be depended upon to ripen here in an average season. "Reliance" is a new variety added two years ago, highly recommended by the Univer-

sity of Saskatchewan. It is too late for our conditions, being later in ripening than "Marquis." Furthermore, it is bearded and weak in the straw. We doubt if it is suitable for any part of Alberta.

Of the oat varieties we are growing, "Legacy" is one of the most interesting. It is of good quality, a consistently good yielder, and about a week earlier than "Banner" or "Victory." It promises to be a useful variety in many of our short season districts. "Cartier" is an early variety received last year from Macdonald College. It is almost as early as "Alaska" and is supposed to be a better yielder.

There is more and more interest being taken in smooth-awned barleys, of which there are now a number available. We added one last year, "No-barb," a product of the Ontario Agricultural College, Guelph.

We have been extending our grass and clover plots somewhat, as there is a growing demand for information on these crops. New plots for the production of hay have been seeded, as well as some for seed.

Following are the yields of some of the leading varieties—the average of 1932 and 1933, the plots having been seeded in 1931:

VARIETY.	Tons per acre.	Quality.
Western Rye Grass, Gazier	6.75	Very good
Western Rye Grass, Fyra	6.4	Very good
Timothy, Gloria	5.12	Very good
Crested Wheat	5.4	Rather coarse
Orchard Grass	1.7	Good
Reed Canary (McDonald)	5.02	Leafy but coarse
Reed Canary (U.S.)	3.5	Leafy but coarse
Meadow Fescue	3.75	Very good
Meadow Foxtail	3.45	Good
Fall Fescue	2.45	Very good
Creeping Red Fescue	3.15	Very good
Sweet Vernal	Winter killed	
Rhode Island Bent	Winter killed	
Crested Dogs Tail	Winter killed	
Grimm Alfalfa	6.6	Very good
MIXTURES.	Tons per acre	Quality
Western Rye, Timothy and Huvax Red Clover, 4 lbs. of each	3.25	Excellent
Western Rye, Timothy and Siberian Red Clover, 4 lbs. of each	4.29	Excellent
Western Rye, Timothy and Alsike, 4 lbs. of each	3.46	Excellent
Western Rye, Timothy and Alfalfa, 4 lbs. of each	5.05	Excellent
Western Rye, Timothy and Yellow Sweet Clover, 4 lbs. of each	4.75	Good
Alfalfa and Yellow Sweet Clover, 6 lbs. of each	6.41	First crop, coarse Second crop, excellent

Two years ago we put down some plots of from one-quarter to one-third of an acre to grasses, clovers and mixtures to test their suitability for pasture. We planned to check the yield of the various kinds under test by determining their carrying capacity and to note also their palatability. We were unable to carry the test through exactly as planned, as we were unable to fence all the plots. We got some data of value, and hope during the coming season to gather more.

In the spring of 1932 we seeded to Creeping Red Fescue between three and four acres, the seed being supplied by the Dominion Seed Branch. Part of the area was seeded broadcast at the rate of eight pounds per acre and the balance in rows two feet apart at two pounds per acre. The row seeding was not well established

by fall, and suffered so severely from winter-killing that it was plowed up. The broadcast seeding, however, wintered perfectly. We had an abundant supply of moisture in the spring, and the grass made satisfactory growth. June and July were very dry. The conditions seemed favourable to seed setting, as we harvested 620 pounds from 1.9 acres, or at the rate of 326 pounds per acre. Part of the area, about half an acre, which was slightly mixed with timothy was cut for hay, and produced at the rate of 2.86 tons per acre. The hay was of excellent quality, resembling in appearance and texture high class prairie wool. It was greatly relished by stock.

Most of the seed of Creeping Red Fescue was turned over to the Dominion Seed Branch for propagation. We retained about 100 pounds which we shall use to extend our acreage and to put into the hands of others interested in growing it. It promises to be a very useful pasture grass for Central Alberta, and possibly for other sections.

We harvested seed this year from a small plot of Chewings' Fescue, one of the finer growing grasses of this group that is used extensively for lawns and putting greens. The yield was 400 pounds per acre, which we regard as very satisfactory. Canada imports each year upwards of 100 tons of this seed, which is sold at about 30 cents per pound.

We also harvested seed from about one-third of an acre of "Fairways" Crested Wheat Grass. This is an improved strain, finer growing and more leafy than the ordinary Crested Wheat Grass. It yielded at the rate of over 1,200 pounds of seed per acre.

A fairly large block of lawn was broken up two years ago last spring on account of its becoming very badly infested with dandelions. Part of it was summerfallowed one year and part of it for two years before it was re-seeded. Radical treatment seems to be necessary to destroy this weed.

Before the lawn was re-seeded it was well fertilized and put into excellent tilth. A mixture of Kentucky Blue Grass, three parts, and Crewings' Fescue, one part, was used at the rate of about 30 pounds per acre. An excellent turf was secured, which should continue to hold its own against dandelions for at least five or six years. A thick stand of grass and a soil well supplied with plant food appear to be two prime essentials in maintaining a good stand of grass in a lawn.

We had a very satisfactory setting of fruit in the orchard and practically no winter-killing among the trees, which have become well established. The orchard has a light shelter-belt of willow, pine and Manitoba maple, and the trees are spaced 15 feet apart each way. This we find rather too close.

The following varieties of apple trees produced mature fruit in 1933: Patten's Greening, Hibernial, Blushed Calville, Ostrakoff, Charlamoff and Ananoura, as well as nine varieties of crab apples, including Transcendent, Hyslop, and Sylvia. Raspberry, currant and gooseberry bushes also produced excellent crops of fruit.

VALUE OF AGRICULTURAL PRODUCTION

REVISED ESTIMATE FOR SEASON OF 1932

GRAIN CROPS:	Acreage.	Yield per Acre Bus.	Total Yield Bus.	Price.	Value.
Wheat	8,201,000	20.04	167,855,000	\$.32	\$53,554,000
Oats	2,704,800	37.50	101,500,000	.13	13,195,000
Barley	701,300	28.10	19,700,000	.16	3,152,000
Rye	183,100	10.90	1,988,000	.24	476,680
Mixed Grains	25,300	28.90	731,000	.14	102,000
Flax	15,200	9.70	147,000	.59	86,700
Peas	400	16.00	6,000	.60	3,600
Beans	500	11.80	6,000	.70	4,200
Alfalfa Seed	2,000	.62	1,250	12.00	15,000
	11,833,600		291,434,250		\$70,589,180
ROOT CROPS:		Cwt.	Cwt.		
Potatoes	31,000	68.0	2,102,000	\$.64	\$ 1,345,000
Turnips, Mangolds, etc.	1,800	115.0	207,000	.64	132,000
		Tons	Tons		
Sugar Beets	13,929	10.80	150,731	6.20	934,532
	46,729				\$ 2,411,532
FODDER CROPS:		Tons	Tons		
Green Feed	1,850,000	1.75	3,238,000	\$ 6.00	\$19,128,000
Hay and Clover	231,300	1.54	356,000	6.50	2,314,000
Alfalfa	56,800	2.45	139,000	8.00	1,112,000
Fodder Corn	4,500	5.81	26,000	3.50	91,000
	2,142,600		3,759,000		\$22,945,000
DAIRY PRODUCTS:	No. of Creameries or Factories.	Total Production, Lbs.	Cents.	Value.	
Creamery Butter	95	21,016,048	16.71	\$ 3,512,685	
Cheese	12	1,439,715	10.15	146,177	
Other Dairy Products ....	....	.....	.....	8,191,138	
				\$11,850,000	
MISCELLANEOUS PRODUCTS:		Total Production, Lbs.	Cents.	Value.	
Honey		550,000	8.0	\$ 44,000	
Wool Clip		3,200,000	4.5	144,000	
Poultry Products .....		.....	....	4,000,000	
Game and Furs .....		.....	....	877,332	
Animals Slaughtered and Sold.....		.....	....	17,585,582	
				\$22,650,914	

DEPARTMENT OF AGRICULTURE

PRELIMINARY ESTIMATE FOR SEASON OF 1933

(SUBJECT TO REVISION)

GRAIN CROPS:	Acreage.	Yield per Acre Bus.	Total Yield Bus.	Price.	Value.
Wheat	7,898,000	12.00	94,500,000	\$.41	\$38,745,000
Oats	2,870,000	25.30	72,500,000	.15	10,875,000
Barley	631,000	20.30	12,783,000	.17	2,173,000
Rye	169,000	5.30	902,000	.26	239,000
Mixed Grains	20,800	22.30	464,000	.18	84,000
Flax	10,700	4.00	43,000	1.05	45,000
Peas	600	13.00	7,800	1.00	8,000
Beans	800	12.60	10,000	1.30	13,000
Alfalfa Seed	2,100	.67	1,417	12.00	17,000
	11,603,000		181,211,217		\$52,199,000
ROOT CROPS:		Cwt.	Cwt.		
Potatoes	32,000	58.00	1,856,000	\$.75	\$ 1,392,000
Turnips, Mangolds, etc.	1,900	81.00	154,000	.65	100,000
		Tons	Tons		
Sugar Beets	14,040	9.79	137,458	6.00	824,748
	47,940				\$ 2,316,748
FODDER CROPS:		Tons	Tons		
Green Feed	1,900,000	1.75	3,080,000	\$ 5.00	\$15,400,000
Hay and Clover	282,400	1.28	361,000	6.00	2,166,000
Alfalfa	73,100	1.94	142,000	8.00	1,136,000
Fodder Corn	5,000	2.52	13,000	4.70	61,000
	2,260,500		3,596,000		\$18,763,000
DAIRY PRODUCTS:	No. of Creameries or Factories.	Total Production, Lbs.	Cents.	Value.	
Creamery Butter	96	23,852,350	18.10	\$ 4,308,962	
Cheese	11	1,437,387	10.40	149,593	
Other Dairy Products.....	....	.....	.....	8,491,445	
				\$12,950,000	
MISCELLANEOUS PRODUCTS:		Total Production, Lbs.	Cents.	Value.	
Honey		1,000,000	9	\$ 90,000	
Wool		3,400,000	10	340,000	
Poultry Products .....		.....	....	5,000,000	
Game and Furs .....		.....	....	1,074,885	
Animals Slaughtered and Sold .....		.....	....	20,767,325	
				\$27,272,210	

SUMMARY

VALUE OF PRODUCTION:	1932.	1933.
Grain, Root and Fodder Crops	\$ 95,945,712	\$ 73,278,748
Dairy Products	11,850,000	12,950,000
Miscellaneous Products	22,650,914	27,272,210
	\$130,446,626	\$113,500,958
ACREAGE UNDER CULTIVATION:	1932. Acres.	1933. Acres.
Grain, Root and Fodder Crops	14,022,929	13,911,440
Summerfallow	4,003,800	4,075,470
New Breaking	255,600	221,300
	18,282,329	18,208,210